

# IDAHO

## Motorcycle Operator's Manual

May 2015



Now available on CD or online at: [www.itd.idaho.gov/dmv](http://www.itd.idaho.gov/dmv)

Published by the Idaho Transportation Department

Cover photo courtesy of the Idaho **STAR** Motorcycle Safety Program



[idahostar.org](http://idahostar.org)

Cover design by: Pauline Davis, Graphic Artist, ITD

*The Idaho Transportation Department (ITD) is committed to compliance with Title VI of the Civil Rights Act of 1964 and all related regulations and directives. ITD assures that no person shall on the grounds of race, color, national origin, gender, age, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any ITD service, program, or activity. The department also assures that every effort will be made to prevent discrimination through the impacts of its programs, policies, and activities on minority and low-income populations. In addition, the department will take reasonable steps to provide meaningful access to services for persons with limited English proficiency.*



# Idaho Motorcycle Operator's Manual

May 2015

Published by

**The Idaho Transportation Department**

**Division of Motor Vehicles**

**P.O. Box 7129**

**Boise, ID 83707-1129**

**Phone # (208) 334-8736**

**Fax # (208) 334-8739**

**Web Address [dmv.idaho.gov](http://dmv.idaho.gov)**

This handbook paraphrases the language of the Idaho Motor Vehicle Code. Courts go by the actual language of the code, not this text.

01-968130-3

## PREFACE

Operating a motorcycle\* safely in traffic requires special skills and knowledge. The purpose of this manual is to educate Idaho motorcycle operators and to convey essential safe-driving information that will help them avoid accidents while safely operating a motorcycle. While designed for the novice, all motorcyclists can benefit from the information contained in this manual.

The Idaho Transportation Department used information provided by the Motorcycle Safety Foundation (MSF) to compile the *Idaho Motorcycle Operators Manual* and written tests. The National Public Services Research Institute, under contract to the National Highway Safety Administration, developed the original *Motorcycle Operators Manual*.

The Idaho Transportation Department also received assistance from a certified MSF Motorcycle Chief Instructor, representatives from the Department of Education, the Idaho **STAR** Motorcycle Safety Program, and a member of the Idaho Coalition for Motorcycle Safety. These individuals used their own riding experience, and the Motorcycle Safety Foundation's outlines used by other states, to assist the department in developing a motorcycle program for the state of Idaho.

The Motorcycle Safety Foundation helped Idaho and 40 other states to adopt the *Motorcycle Operators Manual* for use in their licensing programs. In addition, Idaho and 28 other states utilize the related motorcycle written tests.

Improved licensing along with quality motorcycle rider education and increased public awareness have the potential to reduce the number and severity of motorcycle crashes.

*\* A motorcycle means every motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground, but excluding a tractor and moped.*

# Do you need a motorcycle endorsement?



If you operate any motorized vehicle on public roadways, Idaho law requires you to have a valid driver's license and acceptable proof of liability insurance. If you operate a motorcycle on public roadways, you will also need to add a motorcycle endorsement to your Idaho driver's license.

**Review the definitions below to see if the vehicle you operate is a motorcycle or motor-driven cycle that requires you to have a motorcycle endorsement on your driver's license.**

## Definitions:

- **“Motorcycle” [49-114(11)]** every motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three (3) wheels in contact with the ground, that meets the federal motor vehicle safety standards (FMVSS) as originally designed, and includes a converted motorbike, but does not include a motor-driven cycle, a motorbike, a tractor or a moped. Motorcycles require a motorcycle endorsement.
- **“Motorbike” [49-114(10)]** means a vehicle as defined in [67-7101(9)] – means any self-propelled two (2) wheeled motorcycle or motor-driven cycle, excluding tractor, designed for or capable of traveling off developed roadways and highways and also referred to as trail bikes, enduro bikes, trials bikes, motocross bikes or dual purpose motorcycles. Such vehicle shall be titled and may be approved for motorcycle registration, upon certification by the owner of the installation and use of conversion components that make the motorbike compliant with FMVSS. If converted, operation on public roads requires a motorcycle endorsement.
- **“Motor-Driven Cycle” [49-114(13)]** means a cycle with a motor that produces five (5) brake horsepower or less as originally manufactured that meets federal motor vehicle safety standards as originally designed, and does not include mopeds. Such vehicles shall be titled and a motorcycle endorsement is required for its operation.
- **“Motor Scooter” and “Scooter”** - generic terms, not defined in the Idaho traffic law manual, referring to a wide variety of motorized cycles and toys. A two or three-wheeled vehicle of any size, manufactured for use on public roadways **and** sold by a licensed dealer is probably a **motorcycle**.

A vehicle with two or more wheels **not** manufactured for use on public roadways **and** sold by retail variety stores is probably a **toy**.

- **“Moped” [49-114(9)]** means a limited-speed motor-driven cycle having:
  - (a) Both motorized and pedal propulsion that is not capable of propelling the vehicle at a speed in excess of thirty (30) miles per hour on level ground, whether two (2) or three (3) wheels are in contact with the ground during operation. If an internal combustion engine is used, the displacement shall not exceed fifty - (50) cubic centimeters and the moped shall have a power drive system that functions directly or automatically without clutching or shifting by the operator after the drive system is engaged; **or**
  - (b) Two (2) wheels or three (3) wheels with no pedals, which is **powered solely by electrical energy**, has an automatic transmission, a motor which produces less than two (2) gross brake horsepower, is capable of propelling the device at a maximum speed of not more than thirty (30) miles per hour on level ground, and as originally manufactured, meets federal motor vehicle safety standards\* (FMVSS) for motor-driven cycles. (\*Vehicle must have FMVSS labeling certifying compliance with these National Highway Traffic Safety Administration (NHTSA) requirements.) A moped is not required to be titled and no motorcycle endorsement is required of its operator.
- **“Autocycle” [49-102(21)]** means a motor vehicle designed to travel on not more than three (3) wheels in contact with the ground that has a steering wheel and seating that does not require the operator to straddle or sit astride.
- **“Segway”** is considered an **“Electric personal assistive mobility device” [49-106(1)]** - a self-balancing two (2) non-tandem wheeled device designed to transport only one (1) person, with an electric propulsion system limiting the maximum speed to fifteen (15) miles per hour or less.
- **“Pedestrian” [49-117(5)]** means any person afoot and any person operating a wheelchair, motorized wheelchair or electric personal assistive mobility device.
- **“Motorized Toys”** are not considered mopeds, and are not manufactured for use on streets. Adding lights and a seat to any of these vehicles still does not make them street legal. ITD policy prohibits the titling and registration of vehicles not manufactured for use on highways, so these cannot legally be operated on roadways.





# Table of Contents

## EARNING YOUR MOTORCYCLE ENDORSEMENT

ENDORSEMENT AND TEST FEES.....	1
--------------------------------	---

## PREPARING TO RIDE

RIDING GEAR.....	3
Helmet Use.....	3
Helmet Selection.....	3
Eye and Face Protection.....	4
Clothing.....	4

KNOW YOUR MOTORCYCLE.....	6
The Right Motorcycle for You.....	6
Required Equipment.....	6
Borrowing and Lending.....	7
Get Familiar with the Motorcycle Controls.....	7
Check Your Motorcycle.....	8

KNOW YOUR RESPONSIBILITIES.....	10
---------------------------------	----

## RIDE WITHIN YOUR ABILITIES

BASIC VEHICLE CONTROL.....	11
Body Position.....	11
Shifting Gears.....	12
Braking.....	13
Turning.....	15

KEEPING YOUR DISTANCE.....	17
Lane Positions.....	17
Following Another Vehicle.....	18
Being Followed.....	19
Passing and Being Passed.....	19
Lane Sharing.....	21
Merging Cars.....	21
Cars Alongside.....	22

“SIPDE”.....	23
--------------	----

<b>INTERSECTIONS.....</b>	<b>25</b>
Blind Intersections.....	26
Stop Signs and Signals.....	26
Traffic Control Signals.....	26
Passing Parked Cars.....	27
Parking at the Roadside.....	27
<b>SEE AND BE SEEN.....</b>	<b>28</b>
Clothing.....	28
Headlight.....	28
Signals.....	28
Brake Light.....	29
Using Your Mirrors.....	29
Head Checks.....	30
Horn.....	30
Riding at Night.....	31
<b>CRASH AVOIDANCE.....</b>	<b>32</b>
Quick Stops.....	32
Front-Wheel Skids.....	32
Rear-Wheel Skids .....	32
Swerving or Turning Quickly.....	33
Cornering.....	34
<b>HANDLING DANGEROUS SURFACES.....</b>	<b>35</b>
Uneven Surfaces and Obstacles.....	35
Slippery Surfaces.....	36
Railroad Tracks, Trolley Tracks, Pavement Seams.....	37
Grooves and Gratings.....	37
<b>MECHANICAL PROBLEMS.....</b>	<b>38</b>
Tire Failure.....	38
Stuck Throttle.....	38
Wobble.....	38
Drive Train Problems.....	39
Engine Seizure.....	39
<b>ANIMALS.....</b>	<b>40</b>
<b>FLYING OBJECTS.....</b>	<b>40</b>
<b>GETTING OFF THE ROAD.....</b>	<b>40</b>

<b>CARRYING PASSENGERS AND CARGO.....</b>	<b>41</b>
Equipment.....	41
Instructing Passengers.....	41
Riding with Passengers.....	42
Carrying Loads.....	42

<b>GROUP RIDING.....</b>	<b>43</b>
Keep the Group Small.....	43
Keep the Group Together.....	43
Keep Your Distance.....	44

## **BEING IN SHAPE TO RIDE**

<b>WHY THIS INFORMATION IS IMPORTANT.....</b>	<b>46</b>
Alcohol and Other Drugs in Motorcycle Operation.....	46
Alcohol in the Body.....	47
Blood Alcohol Concentration (BAC).....	47
Alcohol and the Law.....	48
Consequences of Conviction.....	48
Alcohol Test Refusal.....	49
Administrative License Suspensions.....	49
Minimize the Risks.....	50
Make an Intelligent Choice.....	50
Step in to Protect Friends.....	50

<b>FATIGUE.....</b>	<b>51</b>
---------------------	-----------

<b>PROFESSIONAL TRAINING INFORMATION.....</b>	<b>51</b>
---	-----------

<b>SMART RIDER COMMITMENTS.....</b>	<b>54</b>
-------------------------------------	-----------

<b>KNOWLEDGE TEST (Sample Questions).....</b>	<b>55</b>
---	-----------

<b>MOTORCYCLE SKILL TEST.....</b>	<b>56</b>
-----------------------------------	-----------

<b>ANSWERS TO SAMPLE QUESTIONS.....</b>	<b>61</b>
---	-----------



# Earning Your Motorcycle Endorsement

Operating a motorcycle can be safe and fun when you act as a responsible rider. It also requires special skills and a heightened sense of awareness about other road users, traffic, and environmental conditions and a personal strategy to manage potential problems. Studying this manual will not only help you pass your licensing tests, but it will also help prepare you to become a responsible and safe motorcyclist. Take your time learning how to operate your motorcycle and get plenty of riding experience. Find an experienced and responsible motorcyclist to mentor your learning. This mentoring and riding experience will prepare you for handling today's traffic environment and reduce the potential for a crash.

All riders are also encouraged (required if under age 21) to attend an entry-level rider education course which provides knowledge and hands-on training before receiving a motorcycle endorsement.

## Idaho Requirement to Operate a Motorcycle

To operate a motorcycle in Idaho, you must have a valid driver's license (Class A, B, C, or D) and a motorcycle endorsement on that license (a motorcycle instruction permit can temporarily be used prior to obtaining the endorsement).

Any person applying for a motorcycle endorsement or renewing a license expired for 25 months or longer will be required to pass both a motorcycle knowledge test and motorcycle skills test. If you are surrendering an out-of-state or foreign license (not expired over one year) that has a motorcycle endorsement, you are required to pass a motorcycle knowledge test. Any person under age 21 will be required to take a knowledge test and successfully complete an approved motorcycle rider training course. It is a good idea to take a course even if you are 21 or older.

## Motorcycle Instruction Permit

A motorcycle instruction permit is available to anyone who holds a valid Idaho Class A, B, C, or D license. This permit is valid for 180 days and allows motorcycle operators to practice riding under the following restrictions.

- Daylight riding only
- No freeway riding
- No passengers

You must pass the motorcycle knowledge test before applying for an instruction permit. If you add the motorcycle endorsement to your Idaho driver's license during the instruction permit period, the one-time motorcycle endorsement fee will be waived. Once the instruction permit has expired, you must pay the endorsement fee. The motorcycle instruction permit may be renewed one (1)

time without requiring the permit holder to retake and pass the motorcycle knowledge test, provided the previous knowledge test was taken within the past 12 months.

## **Motorcycle Knowledge Test**

The motorcycle knowledge test is taken at any County Driver's License office. The fee for the knowledge test is \$3.00. Knowledge test questions are based on information, practices, and concepts found in this manual. In order to pass the test, you must know and understand road rules and safe riding practices.

## **Motorcycle Skills Test**

Motorcycle riding skills tests are conducted by third-party skills testers in a controlled, off-street area. A list of skills testers can be obtained at any County Driver's License office or online at [www.dmv.idaho.gov](http://www.dmv.idaho.gov) under Driver Services. You may contact any of the skills testers on the list to schedule a skills test.

## **Failed Tests**

If you fail a knowledge test and/or skills test, you must wait three days to retest and pay the applicable fee(s) again. This includes paying the \$3.00 fee again for the knowledge test, and the \$10.00 skills test fee again to the Skills Tester.

## **Motorcycle Rider Training Course**

Successful completion of an approved motorcycle rider training course will waive the requirement for the riding skills test, if you get the endorsement within a year.

For information and to register for a rider course nearest you, contact Idaho STAR online at [Idahostar.org](http://Idahostar.org) or toll-free (888) 280-STAR (7827).

## **Fees**

Below are the fees related to motorcycle endorsements. These are in addition to any fees required for obtaining your driver's license:

Motorcycle "M" Endorsement:	\$15.00 (one-time fee)
Motorcycle Instruction Permit:	\$15.00 (valid for 180 days)
Motorcycle Skills Test:	\$10.00 (paid to skills tester)
Motorcycle Knowledge Test:	\$3.00 (paid to county)

# **Preparing To Ride**

What you do before you start a trip goes a long way toward determining whether or not you'll get where you want to go safely. Before taking off on any trip, a safe rider makes a point to:

- Wear the right gear.
- Check the motorcycle equipment.
- Become familiar with the motorcycle.
- Be a responsible rider.

## **RIDING GEAR**

When you ride, your gear is “right” if it protects you. In any crash, you have a far better chance of avoiding serious injury if you wear:

- An approved helmet.
- Face or eye protection.
- Protective clothing.

### **Helmet Use**

Crashes can occur, particularly among untrained beginning riders. And one out of every five motorcycle crashes results in head or neck injuries. Head injuries are just as severe as neck injuries, and are more common. Accident analysis show that head and neck injuries account for a majority of serious and fatal injuries to motorcyclists. Research shows that, with few exceptions, head and neck injuries are reduced by properly wearing an approved helmet. Idaho law requires all persons under the age of 18 to wear a DOT-approved protective helmet while riding on or operating a motorcycle or ATV on or off road.

Some riders don’t wear helmets because they think helmets will limit their view to the sides. Others wear helmets only on long trips or when riding at high speeds. Consider the following:

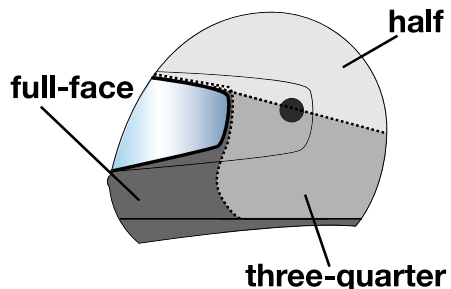
- A DOT-approved helmet lets you see as far to the sides as necessary. A study of more than 900 motorcycle crashes, where 40% of the riders wore helmets, did not find even one case in which a helmet kept a rider from spotting danger.
- Most crashes happen on short trips (less than five miles long), just a few minutes after starting out.
- Most motorcycle crashes occur at less than 30 mph. At these speeds, helmets can cut both the number and the severity of head injuries by half.

No matter what the speed, helmeted riders are three times more likely to survive head injuries than those not wearing helmets at the time of the crash. The single most important thing you can do to improve your chances of surviving a crash is to wear a securely-fastened, approved helmet.

### **Helmet Selection**

There are three primary types of helmets, providing three different levels of coverage: half, three-quarter, and full face.

Whichever style you choose, you



can get the most protection by making sure that the helmet:

- Meets U.S. Department of Transportation (DOT) standards. Helmets with labels from the Snell Memorial Foundation also give you an assurance of quality.
- Fits snugly, all the way around.
- Has no obvious defects such as cracks, loose padding, or frayed straps.

Whatever helmet you decide on, keep it securely fastened on your head when you ride. Otherwise, if you are involved in a crash, it's likely to fly off your head before it gets a chance to protect you.

### **Eye and Face Protection**

A plastic shatter-resistant faceshield can help protect your whole face in a crash. It also protects your face from wind, dust, dirt, rain, insects, and pebbles thrown up from vehicles ahead. These problems can be distracting and painful. If you have to deal with them, you can't devote your full attention to your safety and the road. Wearing a faceshield may help prevent a crash, and it gives the most eye and face protection while riding.

Goggles protect your eyes, though they won't protect the rest of your face like a faceshield does. A windshield is not a substitute for a faceshield or goggles. Most windshields will not protect your eyes from the wind. Neither will eyeglasses or sunglasses. Glasses won't keep your eyes from watering, and they may blow off when you turn your head while riding.

To be effective, eye or face protection must:

- Be free of scratches.
- Be resistant to penetration.
- Give a clear view to either side.
- Fasten securely, so it does not blow off.
- Permit air to pass through, to reduce fogging.
- Permit enough room for eyeglasses or sunglasses, if needed.

Tinted eye protection should not be worn at night or any other time when little light is available.

### **Clothing**

The right clothing protects you in a crash. It also provides comfort, as well as protection from heat, cold, debris, and hot and moving parts of the motorcycle. It can also make you more visible to others.

- **Jacket and pants** should cover your arms and legs completely. They should fit snugly enough to keep from flapping in the wind, yet loosely enough to move freely. Leather is very popular and offers good protection. Sturdy synthetic material provides a lot of protection as well. Wear a jacket even in warm weather, to prevent dehydration. Many are designed to protect without



getting you overheated, even on summer days. Some riders choose jackets and pants with rigid “body armor” inserts in critical areas for additional protection.

- **Boots or shoes** should be high and sturdy enough to cover your ankles and give them support. Soles should be made of hard, durable, slip-resistant material. Choose boots or shoes with short heels so they do not catch on rough surfaces. Tuck laces in so they won’t catch on your motorcycle.
- **Gloves** allow a better grip and help protect your hands in a crash. Your gloves should be made of leather or similar durable material.
- **Hearing Protection** - The roar of engines and the rushing wind is exhilarating, but sustained exposure, even in a good-fitting helmet, can result in hearing loss. Earplugs are cheap and disposable – keep a supply handy and use them! Tests show that earplugs can prevent hearing loss by reducing sound levels by 30 decibels. Whether you choose disposable foam plugs or

reusable custom molded devices, be sure you adhere to state laws regarding hearing protection.

In cold or wet weather, your clothes should keep you warm and dry, as well as protect you from injury. You cannot control a motorcycle well if you are numb from the cold. Riding for long periods in cold weather can cause severe chill and fatigue. A winter jacket should resist wind and fit snugly at the neck, wrists, and waist. Good-quality rainsuits designed for motorcycle riding resist tearing apart or ballooning up at high speeds.

## **Some Riders have High Visibility**



**But you're no  
ISP Motor Officer**

**Get visible!  
Learn how at  
[www.HighViz.org](http://www.HighViz.org).**



## KNOW YOUR MOTORCYCLE

There are plenty of things on the highway that can cause you trouble. Your motorcycle should not be one of them. To make sure that your motorcycle won't let you down:

- Start with the right motorcycle for you.
- Read the owner's manual first.
- Be familiar with the motorcycle controls.
- Check the motorcycle before every ride.
- Keep it in safe riding condition between rides.
- Avoid add-ons and modifications that make your motorcycle harder to handle.

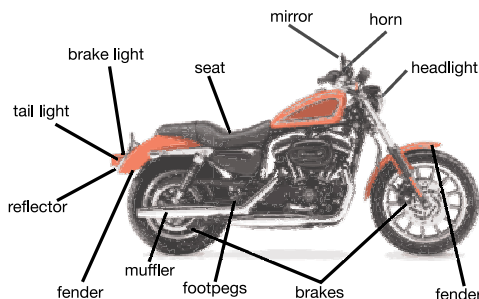
### **The Right Motorcycle For You**

First, make sure your motorcycle is right for you. It should "fit" you. Your feet should reach the ground while you are seated on the motorcycle, and the controls should be easy to operate. Smaller motorcycles are usually easier for beginners to operate.

### **Required Equipment**

Idaho law requires all motorcycles operated on Idaho roads to have the following:

- **Brakes:** The law requires a brake on at least one wheel. It can be operated by hand or by foot.
- **Fenders:** All motorcycles must have fenders on both wheels that extend in full width from a point just forward of the center of the tire to a point not more than 20" above the surface of the highway.
- **Passenger Seat and Footrests:** Motorcyclists are prohibited from carrying passengers unless a permanently attached seat and footrests are provided for the passenger. Passenger footrests must be designed exclusively for use by the passenger.
- **Headlight:** Motorcycles must have a headlight sufficient to reveal a person or vehicle not less than 100 feet ahead when traveling 25 mph or less; not less than 200 feet when traveling 25-35 mph; and not less than 300 feet when traveling more than 35 mph.
- **Helmet:** Any person under the age of 18 must wear a protective



helmet while operating or riding on a motorcycle or ATV, on or off road.

- **Horn:** You must have a horn that can be heard up to 200 feet away.
- **Insurance:** You must have (and carry on your person) liability insurance in an amount of not less than \$25,000.
- **Mirror:** Motorcycles must have a mirror that provides a view of the highway for at least 200 feet to the rear.
- **Muffler:** Motorcycles must have a muffler that does not increase engine noise to a level above that of the muffler originally installed by the motorcycle manufacturer.
- **Brake Light:** A red stop light that comes on when you work the brakes must be visible for 100 feet to the rear during normal sunlight.
- **Taillight:** Motorcycles must have one red taillight visible for 500 feet to the rear.
- **Reflector:** motorcycles and motor-driven cycles shall have at least one (1) rear reflector.

### **Borrowing and Lending**

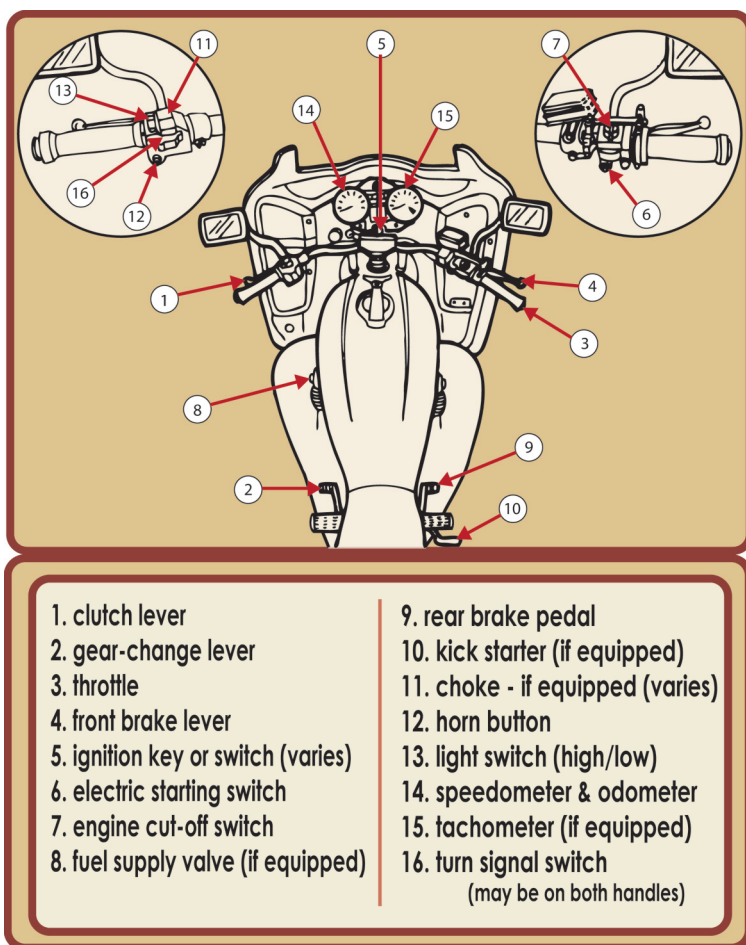
Borrowers and lenders of motorcycles, beware. Crashes are fairly common among beginning riders — especially in the first months of riding. Riding an unfamiliar motorcycle adds to the problem. If you borrow a motorcycle, get familiar with it in a controlled area and make sure it is insured, because you are liable. If you lend your motorcycle to friends, make sure they are licensed and know how to ride before allowing them out into traffic.

No matter how experienced you may be, ride extra carefully on any motorcycle that's new or unfamiliar to you. More than half of all crashes occur on motorcycles that have been ridden by the operator for less than six months. It takes time to adjust, so give yourself a greater margin for errors.

### **Get Familiar with the Motorcycle Controls**

Make sure you are completely familiar with the motorcycle before you take it out on the street. This is particularly important if you are riding a borrowed motorcycle. If you are going to use an unfamiliar motorcycle:

- Review the owner's manual.
- Make all the checks you would on your own motorcycle.
- Find out where everything is, particularly the turn signals, horn, headlight switch, fuel-supply valve, and engine cut-off switch (usually located on right hand grip). Learn to operate these items without having to look for them.
- Know the gear pattern. Work the throttle, clutch, and brakes a few times before you start riding. All controls react a little differently.
- Ride very cautiously. Accelerate gently, take turns more slowly, and leave extra room for stopping.



**NOTE:** Check the equipment before you pull onto the road, as each motorcycle may be different.

### Check Your Motorcycle

A motorcycle needs more frequent attention than a car. A minor technical failure in a car seldom leads to anything more than an inconvenience for the driver. The same failure on a motorcycle may result in a crash or having to leave your motorcycle parked on the side of the road.

If something's wrong with the motorcycle, you'll want to find out about it before you get in traffic. Make a complete check of your motorcycle before every ride.

Before mounting any motorcycle, make the following checks:



- **Tires** — Check the air pressure, general wear, and tread.
- **Fluids** — Oil and fluid levels. At a minimum, check hydraulic fluids and coolants weekly. Look under the motorcycle for signs of fluid leaks.
- **Headlights and Taillight** — Check them both. Test your switch to make sure both high and low beams are working.
- **Turn Signals** — Turn on both right and left turn signals. Make sure all four lights are working properly.
- **Brake Light** — Try both brake controls, and make sure each one turns on the brake light.

Once you have mounted the motorcycle, complete the following checks before starting out:

- **Clutch and Throttle** — Make sure they work smoothly. The throttle should snap back to the idle position when you let go. The clutch should feel tight and operate smoothly.
- **Mirrors** — Clean and adjust both mirrors before starting. It's difficult to ride with one hand while you try to adjust a mirror. Adjust each mirror so you can see the lane behind and as much as possible of the lane next to you. When properly adjusted, a mirror may show the edge of your arm or shoulder — but what's more important is seeing the road behind and to the side of you.
- **Brakes** — Try the front and rear brake levers one at a time. Make sure each one feels firm and holds the motorcycle when the brake is fully applied.
- **Horn** — Try the horn. Make sure it works.
- **Fuel Supply Valve** — If your motorcycle has one, make sure the valve is open. Your motorcycle may start with the fuel still in the lines, but will stall after the lines are empty.

In addition to the checks you should make before every trip, check the wheels, cables, and fasteners at least once a week.

**1. A plastic shatter-resistant face shield:**

- A. Is not necessary if you have a windshield.
- B. Only protects your eyes.
- C. Helps protect your whole face.
- D. Does not protect your face as well as goggles.

**2. More than half of all crashes:**

- A. Occur at speeds greater than 35 m.p.h.
- B. Happen at night.
- C. Are caused by worn tires.
- D. Involve riders who have ridden their motorcycles less than six months.

*Answers to sample questions are located on last page.*

## **KNOW YOUR RESPONSIBILITIES**

---

“Accident” implies an unforeseen event that occurs without anyone’s fault or negligence. Most often in traffic, that is not the case. In fact, most people involved in a crash can usually claim some responsibility for what takes place.

Consider a situation where someone tries to squeeze through an intersection on a yellow light that is turning red. Your light turns green. You pull into the intersection without checking for possible latecomers. That is all it takes for the two of you to tangle. It was the other driver’s responsibility to stop. And it was your responsibility to look before pulling out. Neither of you held up your end of the deal. Just because someone else is the first to start the chain of events leading to a crash, it doesn’t leave any of us free of responsibility.

As a rider you can’t be sure that other operators will see you or yield the right of way. To lessen your chances of a crash occurring:

- **Be visible** — wear proper clothing, use your headlight (set on dim during daylight hours), and ride in the best lane position to see and be seen.
- **Communicate your intentions** — use the proper signals, brake light, and lane position.
- **Maintain an adequate space cushion** — allow extra space when following, being followed, lane sharing, passing, and being passed.
- **Search your path** of travel 20 seconds ahead.
- **Identify and separate** multiple hazards in your path of travel.
- **Be prepared to act** — remain alert and know how to use proper crash-avoidance skills.

Blame doesn’t matter when someone is injured in a crash. There is rarely a single cause of any crash. The ability to ride aware, make critical decisions, and carry them out separates responsible riders from all the rest. Remember, it is up to you to keep from being the cause of, or an unprepared participant in, any crash.

# Ride Within Your Abilities

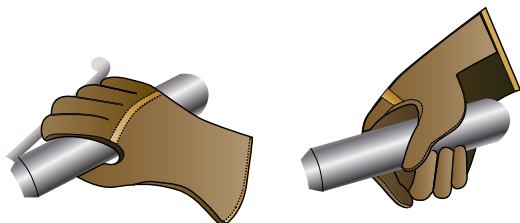
This manual cannot teach you how to control direction, speed, or balance. That's something you can learn only through practice and proper training. But control begins with knowing your abilities, riding within them, and obeying the rules of the road.

## BASIC VEHICLE CONTROL

### **Body Position**

To control a motorcycle well:

- **Seat** — Sit far enough forward so that arms are slightly bent when you hold the handlegrips. Bending your arms permits you to press on the handlebars without having to stretch.
- **Hands** — Hold the handgrips firmly to keep your grip over rough surfaces. Start with your right wrist flat. This will help you keep from accidentally using too much throttle — especially if you need to reach for the brake suddenly. Also, adjust the handlebars so your hands are even with or below your elbows. This permits you to use the proper muscles for precise steering.



**RIGHT**

**WRONG**

- **Knees** — Keep your knees against the gas tank to help you keep your balance as the motorcycle turns.
- **Feet** — Keep your feet firmly on the footpegs to maintain balance. Don't drag your feet. If your foot catches on something, you can be injured and it could affect your control of the motorcycle. Keep your feet near the controls so you can get to them quickly if needed. Also, don't let your toes point downward — they may get caught between the road and the footpegs.
- **Posture** — Sit so you can use your arms to steer the motorcycle rather than to hold yourself up.

## Shifting Gears

There is more to shifting gears than simply getting the motorcycle to pick up speed smoothly. Learning to use the gears correctly when downshifting, turning, or starting on hills is important for safe motorcycle operation.

The gearshift lever is located in front of the left footrest and is operated by the left foot. To shift “up” to a higher gear, position your foot under the shift lever and lift. To downshift, press the shift lever down. The shift lever changes one gear each time it is lifted or pressed down. Whenever the lever is released, spring loading returns it to center, where the mechanism resets for the next shift up or down. A typical gear pattern is 1-N-2-3-4-5. The N is for neutral, which is selected by either a “half lift” from 1st gear or a “half press” from 2nd gear. Most motorcycles have five gears, but some have four or six gears.

As your motorcycle increases speed, you will need to shift up to a higher gear. Shift up well before the engine RPM reaches its maximum recommended speed. As a general rule, shift up soon enough to avoid over-revving the engine, but not so soon to cause the engine to lug.

When upshifting, use a 3-step process:

- 1) roll off the throttle as you squeeze the clutch lever,
- 2) lift the shift lever firmly as far as it will go,
- 3) smoothly ease out the clutch and adjust the throttle.

Once the shift is completed, release the shift lever to permit it to reset for the next shift. You should shift down through the gears with the clutch as you slow or stop, and can also shift down when you need more power to accelerate.

Make certain you are riding slowly enough when you shift into a lower gear. If not, the motorcycle will lurch, and the rear wheel may skid. When riding downhill or shifting into first gear you may need to use the brakes to slow enough before downshifting safely.

When downshifting, use a 3-step process:

- 1) roll off the throttle as you squeeze the clutch lever,
- 2) press the shift lever down firmly,
- 3) ease out the clutch lever as you adjust the throttle.

Once the shift is completed, release the shift lever to permit it to reset for the next shift. Rolling on the throttle slightly while smoothly easing out the clutch can help the engine come up to speed more quickly and make the downshift smoother. Shifting to a lower gear causes an effect similar to using the brakes. This is known as engine braking. To use engine braking, shift down one gear at a time and ease out the clutch through the friction zone between each downshift. Keep the clutch in the friction zone until the engine speed stabilizes. Then ease

out the lever fully until ready for the next downshift. Usually you shift gears one at a time, but it is possible to shift through more than one gear while the clutch is squeezed.

Remain in first gear while you are stopped so that you can move out quickly if you need to.

Work toward a smooth, even clutch release, especially when downshifting. It is best to change gears before entering a turn. However, sometimes shifting while in the turn is necessary. If so, remember to do so smoothly. A sudden change in power to the rear wheel can cause a skid.

### **Braking**

Improper braking technique remains a significant contributing factor in many motorcycle crashes. Your motorcycle has two brake controls: one for the front wheel and one for the rear wheel. Always use both brakes every time you slow or stop. The front brake is more powerful and can provide at least 70% of your total stopping power. The front brake is safe to use if you use it properly.

Maximum straight-line braking is accomplished by fully applying both front and rear brakes without locking either wheel.

*To do this:*

- **Squeeze the front brake** smoothly, firmly and with increasing pressure. Do not grab the brake lever or use abrupt pressure.
- **As the motorcycle's weight** transfers forward, more traction becomes available at the front wheel, so the front brake can be applied harder after braking begins.
- **Keep your knees against the tank** and your eyes up, looking well ahead. This helps you stop the motorcycle in a straight line.
- **Apply light-to-lighter pressure** to the rear brake pedal to prevent a rear wheel skid. As weight transfers forward less traction is available at the rear. Use less rear brake pressure.

Using both brakes for even “normal” stops will permit you to develop the proper habit or skill of using both brakes properly in an emergency. Squeeze the front brake and press down on the rear. Grabbing at the front brake or jamming down on the rear can cause the brakes to lock, resulting in control problems.

### **Braking in a Corner**

Any time a motorcycle is leaned over, the amount of traction available for braking is reduced. The greater the lean angle, the more the possibility of the tires losing traction.

To stop as quickly and as safely as possible in a curve, and depending on road and traffic conditions, try to get the motorcycle as perpendicular to the road as possible, then brake. If conditions do not allow, brake smoothly and gradually,

but do not apply as much braking force as you would if the motorcycle were straight up. As you slow, you can reduce your lean angle, and as more traction becomes available for braking, you can more firmly apply the brakes, so that by the time the motorcycle is stopped, the motorcycle is straight up, and the handlebars are squared.

### **Linked and Integrated Braking Systems**

Some motorcycles have linked braking which connects the front and rear brakes on the motorcycle and applies braking pressure to both brakes when either the front lever or rear pedal is applied. An integrated braking system is a variation of the linked system in which partial front braking is applied whenever the rear brake is activated. Consult your owner's manual for a detailed explanation on the operation and effective use of these systems.

### **Anti-Lock Braking Systems (ABS)**

The benefit of ABS cannot be overstated. This technology prevents wheel lock-up during straight line stops. To use it, apply maximum pressure on both the front and rear brake. ABS is activated when electronic sensors detect a wheel lock-up (a skid). When a skid is detected, the ABS system releases hydraulic brake pressure long enough to allow the wheel to roll and then reapplies the brake pressure. ABS systems are capable of releasing and reapplying this brake pressure many times per second.

Remember that ABS is only designed to apply full braking force in a straight line. It may not be effective when the motorcycle is leaning. Check your owner's manual for information about your motorcycle's brake system.

Turning

Riders often try to take curves or turns too fast. When they can't hold the turn, they end up crossing into another lane of traffic or going off the road. Or, they overreact and brake too hard, causing a skid and loss of control. Approach turns and curves with caution.

Use four steps for better control:

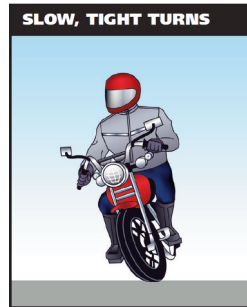
- **SLOW** — Reduce speed before the turn by closing the throttle and, if necessary, applying both brakes.
- **LOOK** — Look through the turn to where you want to go. Turn just your head and eyes, not your shoulders, and keep your eyes level with the horizon.
- **ROLL** — Roll on the throttle through the turn. Maintain steady speed or accelerate gradually. Avoid decelerating in the turn.
- **PRESS** — To turn, the motorcycle must lean. To lean the motorcycle, push on the handgrip in the direction of the turn. Press the left handgrip — lean left — go left. Press the right handgrip — lean right — go right. The higher the speed in a turn, the greater the lean angle.



Press	Lean	Go
-------	------	----



In normal turns, the rider and the motorcycle should lean together at the same angle.



In slow tight turns, counterbalance by leaning the motorcycle only and keeping your body straight.

3. When turning, you should:
  - A. Turn your head and shoulders to look through turns.
  - B. Keep your arms straight.
  - C. Keep your knees away from the gas tank.
  - D. Turn just your head and eyes to look where you are going.

**You drink.  
You ride.  
You crash.  
You die.  
Your brother-in-law  
gets your bike.  
Bummer.**

**Live to ride.**

Not for by the motorcycleists of Minnesota Visit our Web site at <http://www.motorcycle.org>

**SAFETY CENTER**



## **KEEPING YOUR DISTANCE**

One of the best protections you can have is distance – a “cushion of space” – separating yourself from other vehicles on the roadway. This will provide you with a clear view of emerging traffic situations, so that if someone else makes a mistake, you will have:

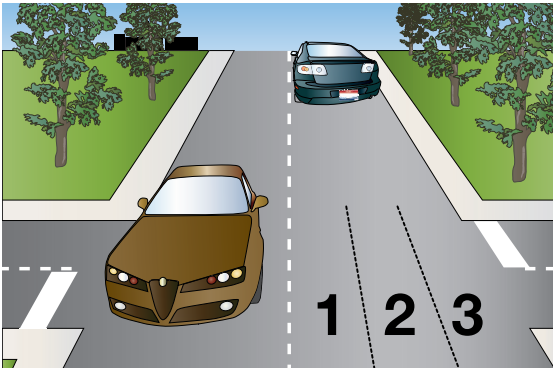
- More time to respond.
- More space to maneuver, including an escape route if necessary.

### **Lane Positions**

Successful motorcyclists know that they are safer when clearly seen. In some ways the size of the motorcycle can work to your advantage. Each traffic lane gives a motorcycle three areas or paths of travel as indicated in the illustration.

Use your lane position to:

- Increase your ability to see and be seen.
- Avoid other drivers' blind spots.
- Avoid surface hazards.
- Protect your lane from other drivers.
- Communicate your intentions.
- Avoid wind blast from other vehicles.
- Provide an escape route.
- Provide a space cushion.
- Set up for turns.



Select the appropriate path to maximize your space cushion and make yourself more visible to others on the road.

Many motorcyclists consider the left third of the lane – the left tire track of automobiles – to be their default lane position. However, you should consider varying your lane position as conditions warrant, keeping in mind that no portion of the lane need be avoided – including the center.

Position yourself in the portion of the lane where you have the best view of the road, are most likely to be seen, and where you can maintain a space cushion around you. Change position as traffic situations change. Ride in path 2 or 3 if vehicles and other potential problems are on your left only. Remain in path 1 or 2 if hazards are on your right only. If vehicles are being operated on both sides of you, the center of the lane, path 2, is usually your best option.

Unless the road is wet, the average center strip (path 2) permits adequate traction to ride safely. The strip in the center portion of the lane that collects drippings from cars is usually no more than two feet wide. You can operate to the left or right of the grease strip and still be within the center portion of the traffic lane. Avoid riding on big buildups of oil and grease, usually found at busy intersections or toll booths.

### **Following Another Vehicle**

Following too closely is a major factor in crashes caused by motorcyclists. In traffic, motorcycles need the same amount of distance as cars to stop safely. Normally, a minimum of three seconds distance should be maintained behind the vehicle ahead. To gauge your following distance:

1. Pick out a marker, such as a pavement marking or lamppost, on or near the road ahead.
2. When the rear bumper of the vehicle ahead passes the marker, count off the seconds: “one-thousand-one, one-thousand-two, one-thousand three.”
3. If you reach the marker before you reach “three,” you are following too closely.

A three-second following distance leaves a minimum amount of space to stop or swerve if the driver ahead stops suddenly. It also permits a better view of potholes and other hazards in the road.

A larger cushion of space is needed if your motorcycle will take longer than normal to stop. If the pavement is slippery, if you cannot see through the vehicle ahead, if traffic is heavy and someone may squeeze in front of you, or if you are pulling a trailer, open up a four-second or more following distance.

Keep well behind the vehicle ahead even when you are stopped. This will make it easier to get out of the way if someone bears down on you from behind. It will also give you a cushion of space if the vehicle ahead starts to back up for some reason.



When behind a car, ride where the driver can see you in the rearview mirror. Riding in the center portion of the lane should put your image in the middle of the rearview mirror — where a driver is most likely to see you.

Riding in the left third of a lane may permit a driver to see you in a sideview mirror and helps you see the traffic ahead. But remember that most drivers don't look at their sideview mirrors nearly as often as they check the rearview mirror. If the traffic and road situation allows, the center portion of the lane may be the best place for you to be seen by the drivers ahead and to prevent lane sharing by others.

### **Being Followed**

Speeding up to lose someone following too closely only ends up with someone tailgating you at a higher speed.

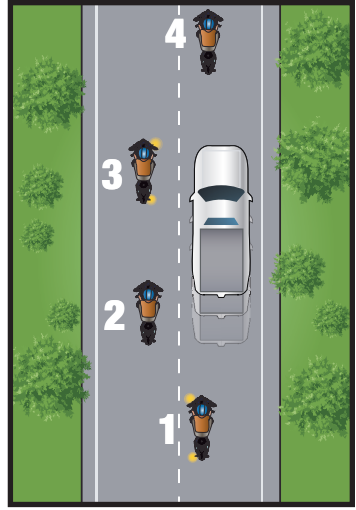
A better way to handle tailgaters is to get them in front of you. When someone is following too closely, change lanes when possible and let them pass. If you can't do this, slow down gradually and open up extra space ahead of you to allow room for both you and the tailgater to stop. This will also encourage them to pass. If they don't pass, you will have given yourself and the tailgater more time and space to react in case an emergency does develop.

### **Passing and Being Passed**

Passing and being passed by another vehicle is not much different than with a car. However, visibility is more critical. Be sure other drivers see you, and that you see potential hazards.

## Passing

1. Ride in the left portion of the lane at a safe following distance to increase your line of sight and make you more visible. Signal and check for oncoming traffic. Use your mirrors and turn your head to the left to look for traffic behind.
2. When safe, move into the left lane and accelerate. Select a lane position that doesn't crowd the car you are passing and provides space to avoid hazards in your lane.
3. Ride through the blind spot quickly.
4. Signal again, complete mirror and headchecks before returning to your original lane, and then cancel the signal.



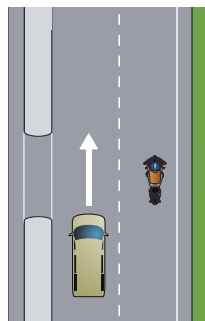
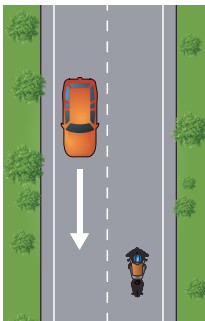
*Remember, passes must be completed within posted speed limits, and only where permitted. Know your signs and road markings!*

## Being Passed

When you are being passed from behind or by an oncoming vehicle, stay in the center portion of your lane.

Avoid being hit by:

- **The other vehicle** — A slight mistake by you or the passing driver could cause a sideswipe.
- **Extended mirrors** — Some drivers forget that their mirrors hang out farther than their fenders.



- **Objects thrown from windows** — Even if the driver knows you're there, a passenger may not see you and might toss something on you or the road ahead of you.
- **Blasts of wind from larger vehicles** — They can affect your control. You have more room for error if you are in the middle portion when hit by this blast than if you are on either side of the lane.

Riding any closer to these hazards could put you in a dangerous position. Do not move into the portion of the lane farthest from the passing vehicle. It might invite the other driver to cut back into your lane too early.

### Lane Sharing

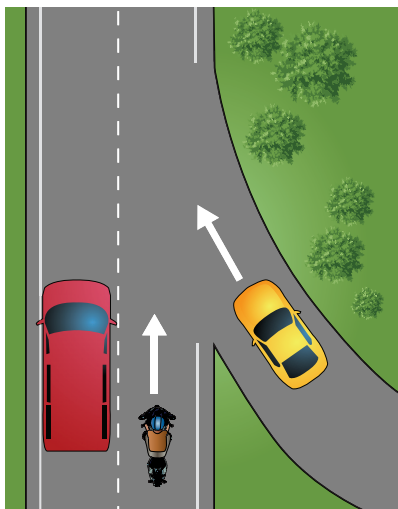
Motorcycles need a full lane in order to maintain a space cushion from other vehicles. Avoid sharing your lane with cars. Lane sharing between cars and motorcycles takes away this space cushion and can leave you without an escape route and vulnerable to a crash. Riding between rows of stopped or moving cars in the same lane can result in a crash due to the unexpected – a hand coming out of a window, a door opening, or a car turning suddenly.

Discourage lane sharing by others, by keeping a center-portion position whenever drivers might be tempted to squeeze by you. Drivers are most tempted to do this:

- In heavy, bumper-to-bumper traffic
- When they want to pass you
- When you are preparing to turn at an intersection
- When you are moving into an exit lane or leaving a highway

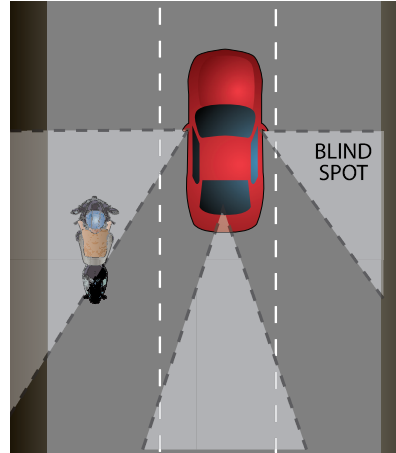
### Merging Cars

Drivers on an entrance ramp may not see you on the highway. Give them plenty of room. Change to another lane if one is open. If there is no room for a lane change, adjust your speed to open up space for the merging driver.



### Cars Alongside

Do not ride next to cars or trucks in other lanes if you do not have to. You might be in the blind spot of a car in the next lane, which could switch into your lane without warning. Cars in the next lane also block your escape if you come upon danger in your own lane. Speed up or drop back to find a place clear of traffic on both sides.



4. Usually, a good way to handle tailgaters is to:
- A. Change lanes if possible and let them pass.
  - B. Use your horn and make obscene gestures.
  - C. Speed up to put distance between you and the tailgater.
  - D. Ignore them.

**What are you drinking?**

**Make the right choice.  
Ride sober.**

A photograph of a man with a beard and mustache, wearing a black leather jacket and jeans, sitting on a red and white motorcycle. He is holding a small bottle of beer in his right hand. The background is a plain, light-colored wall.

## **“SIPDE”**

---

Good experienced riders remain aware of what is going on around them. They improve their riding strategy by using “SIPDE”—a five-step process used to make appropriate judgments—and by applying the steps correctly in different traffic situations:

- **S**can
- **I**dentify
- **P**redict
- **D**ecide
- **E**xecute

Let’s examine each of these steps.

### **Scan**

Search aggressively ahead, to the sides, and behind to avoid potential hazards even before they arise. How assertively you search, and how much time and space you have, can eliminate or reduce harm. Focus even more on finding potential escape routes in or around intersections, shopping areas, school zones, and construction zones.

Search for:

- **Oncoming traffic** that may turn left in front of you.
- **Traffic** coming from the left and right.
- **Traffic** approaching from behind.

Be especially alert in areas with limited visibility. Visually “busy” surroundings could hide you and your motorcycle from others.

### **Identify**

Locate hazards and potential conflicts. Hazards fall into the following three categories:

- **Other vehicles** — may move into your path and increase collision risk.
- **Pedestrians and animals** — are unpredictable, make short, quick moves, and depending on their size, can create an imposing hazard.
- **Stationary objects** — potholes, guard rails, bridges, roadway signs, hedges, tire debris, lumber, or trees won’t move into your path, but failing to recognize them can be hazardous.

### **Predict**

Consider the speed, distance, and direction of hazards to anticipate how they may affect you. Cars moving into your path are more critical than those moving

away or remaining stationary. **Predict** where a collision may occur. Completing this “what if...?” phrase to estimate results of contacting or attempting to avoid a hazard depends on your knowledge and experience.

## **Decide**

Decide when, where, and how to act based on types of hazards you encounter:

- Single Hazard
- Multiple Hazards
- Stationary
- Moving

Weigh consequences of each hazard separately, whether single or multiple hazards are involved. Ask yourself this question: “What am I going to do and how am I going to do it?”

## **Execute**

In high potential risk areas, such as intersections, shopping areas, school zones, and construction zones, cover the clutch and both brakes to reduce the time you need to react.

To create more space and minimize harm from any hazard:

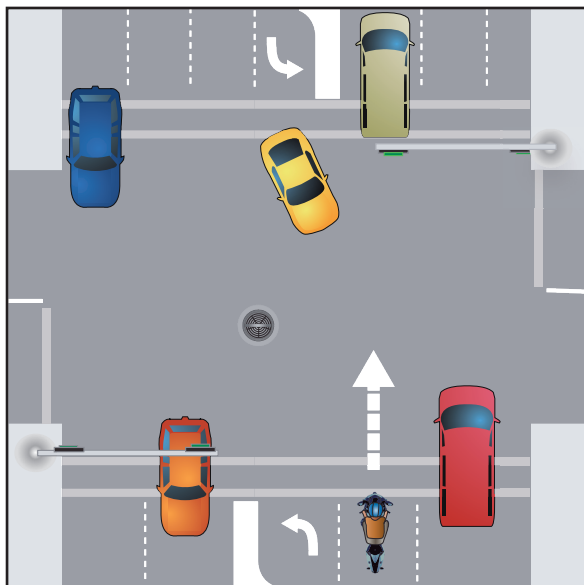
- **Communicate** your presence with lights and/or horn.
- **Adjust your speed** by accelerating, stopping, or slowing.
- **Adjust your position** and/or direction.

Apply the old adage “one step at a time” to handle two or more hazards. Adjust speed to permit two hazards to separate. Then deal with them one at a time as single hazards. Decision-making becomes more complex with three or more hazards. Weigh the consequences of each and give equal distance to the hazards.



## INTERSECTIONS

The greatest potential for conflict between you and other traffic is at intersections. An intersection can be in the middle of an urban area or at a driveway on a residential street — anywhere traffic may cross your path of travel. Over half of motorcycle/car crashes involve a driver entering a rider's right-of-way. Cars that turn left in front of you, including cars turning left from the lane to your right, and cars on side streets that pull into your lane, are the two biggest dangers. Your use of SIPDE (**page 23**) at intersections is critical.



There are no guarantees that other drivers see you. Never count on “eye contact” as a sign that a driver will yield. Too often, drivers look right at motorcyclists and still fail to “see” them. The only eyes that you can count on are your own. If a car can enter your path, assume that it will. Good riders are always “looking for trouble” — not to get into it, but to stay out of it.



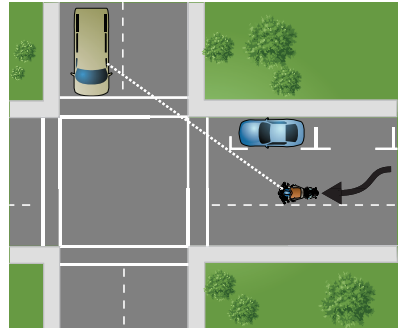
Increase your chances of being seen at intersections. Ride with your headlight on (set on dim during daylight hours) and in a lane position that provides the best view of oncoming traffic. Provide a space cushion around the motorcycle that permits you to take evasive action.

When approaching an intersection where a vehicle driver is preparing to cross your path, slow down

and select a lane position to increase your visibility to that driver. Cover the clutch lever and both brakes to reduce reaction time. As you enter the intersection, move away from the vehicle. Do not change speed or position radically, as drivers might think that you are preparing to turn. Be prepared to brake hard and hold your position if an oncoming vehicle fails to stop or if it turns in front of you, especially if there is other traffic around you. This strategy should also be used whenever a vehicle in the oncoming lane of traffic is signaling for a left turn, whether at an intersection or not.

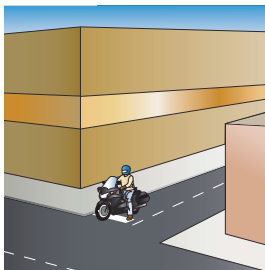
### Blind Intersections

If you approach a blind intersection, move to the portion of the lane that will bring you into another driver's field of sight at the earliest possible moment. In this picture, the rider has moved to the left portion of the lane — away from the parked car — so the driver on the cross street can see the rider as soon as possible.



**Remember, the key is to see as much as possible and remain visible to others while protecting your space.**

### Stop Signs and Signals



If you have a stop sign or stop line, stop there first. Then edge forward and stop again, just short of where the cross-traffic lane meets your lane. From that position, lean your body forward and look around buildings, parked cars, or bushes to see if anything is coming. Just make sure your front wheel stays out of the cross lane of travel while you're looking.

### Traffic Control Signals

Due to their size, motorcycles do not always trigger traffic control signals when approaching an intersection. Effective July 1, 2006, the law was amended to allow a motorcycle rider, after coming to a complete stop, to proceed with caution through a red light at an intersection. However, you may only do so if the signal fails to operate after you wait through one complete cycle of that traffic signal, and you must yield to any traffic in or approaching the intersection.

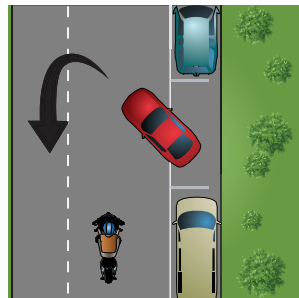
This law change does not provide a defense for violations of traffic laws under Section 49-801, Idaho Code (“Obedience to and required traffic control

devices”). Motorcycle riders must still obey traffic signals when the traffic control signal device can be triggered by the size of motorcycle they are operating, or if the intersection in question does not have a signal triggered by a vehicle detection device.

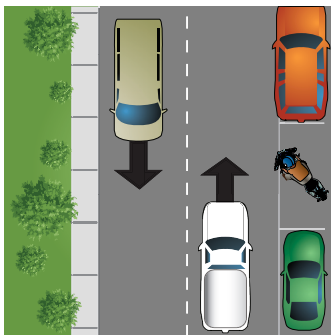
### Passing Parked Cars

When passing parked cars, stay toward the left of your lane. You can avoid problems caused by car doors opening, drivers getting out of cars, or people stepping from between cars. If oncoming traffic is present, it is usually best to remain in the center-lane position to maximize your space cushion.

The greatest danger for a rider occurs when a driver pulls away from the curb without checking for traffic behind. Even a driver who does look may fail to see you. In either event, the driver might cut into your path. Slow down or change lanes to make room for someone cutting in.



Cars making a sudden U-turn are extremely dangerous. They may cut you off entirely, blocking the whole road-way and leaving you with no place to go. Since you can't tell what a driver will do, get the driver's attention. Sound your horn and continue with caution.



### Parking at the Roadside

Angle your motorcycle to see in both directions without straining or having the cycle in the lane of travel. A clear view is particularly important to turn across a lane of traffic. When possible, back into the parking spot to permit riding the motorcycle out into traffic. Position the motorcycle at an angle with the rear wheel to the curb. (Note: Some cities may have ordinances that require motorcycles to park parallel to the curb.)

#### 5. To reduce your reaction time, you should:

- A. Ride slower than the speed limit.
- B. Cover the clutch and the brakes.
- C. Shift into neutral when slowing.
- D. Pull in the clutch when turning.

#### 6. Making eye contact with other drivers:

- A. Is a good sign that they see you.
- B. Is important when approaching an intersection.
- C. Doesn't mean that the driver will yield.
- D. Decreases your chances of being involved in a collision.

## **SEE AND BE SEEN**

In crashes with motorcyclists, drivers often say that they never saw the motorcycle. From ahead or behind, a motorcycle's outline is much smaller than a car's. Also, it's hard to see something you are not looking for, and most drivers are not looking for motorcycles. More likely, they are looking through the skinny, two-wheeled silhouette in search of cars that may pose a problem to them.

Even if a driver does see you coming, you aren't necessarily safe. Smaller vehicles appear farther away, and seem to be traveling slower than they actually are. It is common for drivers to pull out in front of motorcyclists, thinking they have plenty of time. Too often, they are wrong.

However, you can do many things to make it easier for others to recognize you and your motorcycle.

### **Clothing**

Most crashes occur in broad daylight. Wear bright clothing to increase your chances of being seen. Remember, your body is half of the visible surface area of the rider/motorcycle unit.

Wearing bright orange, red, yellow, or green clothing is your best bet for being seen. Your helmet can do more than protect you in a crash. Brightly colored helmets can help others see you.

Any bright color is better than drab or dark colors. Reflective, bright colored clothing (helmet and jacket or vest) is best.

Reflective material on the sides of your helmet and clothing will help drivers coming from the side notice you. Reflective material can also be a big help for drivers coming toward you or from behind.

### **Headlight**

The best way to help others see your motorcycle is to keep the headlight on — *at all times*. (New motorcycles sold in the USA since 1978 automatically have the headlights on when running.) Studies show that, during the day, a motorcycle with its light on is twice as likely to be noticed. Be sure the headlight is adjusted properly and use the "dim" setting during daylight hours.

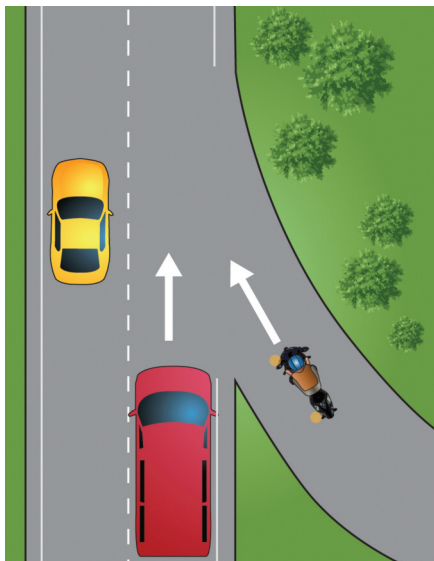
### **Signals**

The signals on a motorcycle are similar to those on a car. They tell others what you plan to do. However, due to a rider's added vulnerability, signals are even more important. Use them anytime you plan to change lanes or turn. Use them even when you think no one else is around. It's the car you don't see that's

going to give you the most trouble. Your signal lights also make you easier to spot. That's why it's a good idea to use your turn signals even when what you plan to do is obvious.

When you enter a freeway, drivers approaching from behind are more likely to see your signal blinking and make room for you.

Turning your signal light on before each turn reduces confusion and frustration for the traffic around you. Once you turn, make sure your signal is off or a driver may pull directly into your path, thinking you plan to turn again. Use your signals at every turn so drivers can react accordingly. Don't make them guess what you intend to do.



### **Brake Light**

Your motorcycle's brake light is usually not as noticeable as the brake lights on a car — particularly when your taillight is on, which goes on with the headlight. Help others notice you by flashing your brake light before you slow down. It is especially important to flash your brake light before:

- You slow more quickly than others might expect (turning off a high-speed highway).
- You slow where others may not expect it (in the middle of a block or at an alley).

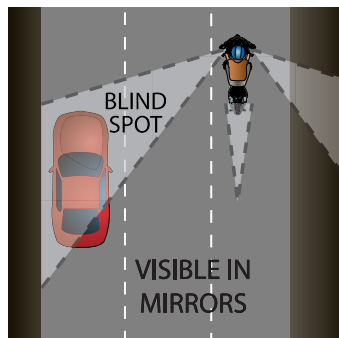
If you are being followed closely, it's a good idea to flash your brake light before you slow. The tailgater may be watching you and not see something ahead that will make you slow down. This will hopefully discourage them from tailgating and warn them of hazards ahead they may not see.

### **Using Your Mirrors**

While it's most important to keep track of what's happening ahead, you can't afford to ignore situations behind. Traffic conditions change quickly. Knowing what's going on behind can help you make a safe decision about how to handle trouble ahead.

Frequent mirror checks should be part of your normal scanning routine. Make a special point of using your mirrors:

- **When you are stopped at an intersection.** Watch cars coming up from behind. If the drivers aren't paying attention, they could be on top of you before they see you.
- **Before you change lanes.** Make sure no one is about to pass you.
- **Before you slow down or stop.** The driver behind may not expect you to slow, or may be unsure about where you will slow. For example, you signal a turn and the driver thinks you plan to turn at a distant intersection rather than at a nearer driveway.



Most motorcycles have rounded (convex) mirrors. These provide a wider view of the road behind than do flat mirrors. They also make cars seem farther away than they really are. If you are not used to convex mirrors, get familiar with them. (While you are stopped, pick out a parked car in your mirror. Form a mental image of how far away it is. Then, turn around and look at it to see how close you came.) Practice with your mirrors until you become a good judge of distance. Even then, allow extra distance before you change lanes.

### Head Checks

Checking your mirrors is not enough. Motorcycles have “blind spots” like cars. Before you change lanes, merge onto a freeway, or pass another vehicle, turn your head and look for other vehicles.

On a road with several lanes, check the far lane and the one next to you. A driver in the distant lane may head for the same space you plan to take. Frequent head checks should be your normal scanning routine. Only by knowing what is happening **all around** you are you fully prepared to deal with it.

### Horn

Be ready to use your horn to get someone's attention quickly. It is a good idea to give a quick beep before passing anyone that may move into your lane.

Here are some situations:

- A driver in the lane next to you is driving too close to the vehicle ahead and may want to pass.

- A parked car has someone in the driver's seat.
- Someone is in the street, riding a bicycle or walking.

In an emergency, press and hold the horn button. Be ready to stop or swerve away from the danger. Keep in mind that a motorcycle's horn isn't as loud as a car's — therefore, use it, but don't rely on it. Other strategies, like having time and space to maneuver, may be appropriate along with the horn.

### **Riding at Night**

At night it is harder for you to see and be seen. Noticing your headlight or taillight amid the car lights around you is not easy for other drivers. To compensate, you should:

- **Reduce Your Speed** — Ride even slower than you would during the day — particularly on roads you don't know well. This will increase your chances of avoiding a hazard because a headlight does not allow you to see as far ahead as in daylight.
- **Increase Distance** — Distances are harder to judge at night than during the day. Your eyes rely upon shadows and light contrasts to determine how far away an object is and how fast it is coming. These contrasts are missing or distorted under artificial lights at night. Open up a four-second following distance or more, and allow more distance to pass and be passed.
- **Use the Car Ahead** — The headlights of the car you are following can give you a better view of the road than even your high beam can. Headlights and/or taillights bouncing up and down can alert you to bumps or rough pavement.
- **Use Your High Beam** — Get all the light you can. Use your high beam whenever you are not following or meeting a car. Be visible: wear reflective materials when riding at night.
- **Be flexible about lane position** — Change to whatever portion of the lane is best able to help you see, be seen, and keep an adequate space cushion.

**7. You should always perform a head check before you:**

- A. Change lanes.**
- B. Merge onto a freeway.**
- C. Pass another vehicle.**
- D. All of the above.**

## **CRASH AVOIDANCE**

No matter how careful you are, there will be times when you find yourself in a dangerous situation. Your chances of getting out safely depend on your ability to react quickly and properly. Often, a crash occurs because a rider is not prepared or skilled in obstacle-avoidance maneuvers.

Know when and how to stop or swerve, two skills critical to avoiding a crash. It is not always desirable or possible to stop quickly to avoid an obstacle. Riders must also be able to swerve around an obstacle. Determining which skill is necessary for the situation is important as well.

Studies show that most riders involved in crashes:

- Underbrake the front tire and overbrake the rear.
- Did not separate braking from swerving or did not choose swerving when it was appropriate.

The following information offers some good advice.

### **Quick Stops**

To stop quickly, apply both brakes at the same time. Don't be shy about using the front brake, but don't "grab" it, either. Squeeze the brake lever firmly with increasing pressure. If the front wheel locks, release the front brake immediately then reapply it smoothly and properly. At the same time, press down on the rear brake pedal. If the rear wheel locks, immediately release the rear brake. Reapply the brake smoothly and properly.

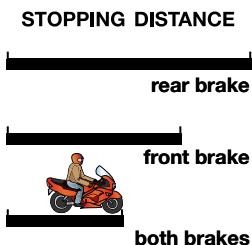
### **Front-Wheel Skids**

If the front wheel locks, release the front brake immediately and completely. Reapply the brake smoothly and properly. Front-wheel skids result in immediate loss of steering control and balance. Failure to fully release the brake lever immediately can result in a crash.

Note – ABS is designed to prevent front-wheel skids.

### **Rear-Wheel Skids**

If the rear wheel locks, release the rear brake immediately and completely. Reapply the brake smoothly and properly. A skidding rear tire is a dangerous condition that can result in a violent crash and serious injury or death. Too much rear brake pressure causes rear-wheel lockup. As soon as the rear wheel locks, your ability to change direction is lost. To regain control the brake must be released. However, if the rear wheel is out of alignment with the front, there is a risk of a high-side crash. This occurs when the wheels are out of alignment and a locked rear wheel is released.





The motorcycle can abruptly snap upright and tumble, throwing a rider into the air ahead of the motorcycle's path. Even slight misalignment can result in a high-side crash. The farther out of alignment the rear wheel becomes, the greater the risk of a high side. Note – ABS is designed to prevent rear-wheel skids.

### **Swerving or Turning Quickly**

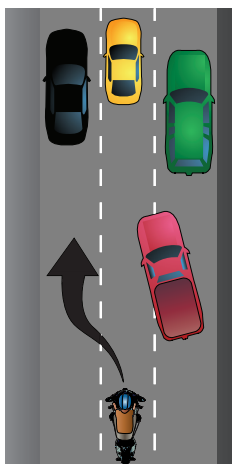
Sometimes you may not have enough room to stop, even if you use both brakes properly. The car ahead might squeal to a stop or an object might appear suddenly in your path. The only way to avoid a crash may be to turn quickly, swerve, or ride over the obstacle.

A swerve is any sudden change in direction. It can be two quick turns, or a rapid shift to the side. Apply a small amount of forward pressure to the handgrip located on the side of your intended direction of escape. This will cause the motorcycle to lean quickly. The sharper the turn(s), the more the motorcycle must lean.

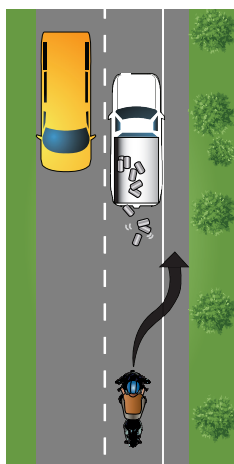
Keep your body upright and allow the motorcycle to lean in the direction of the turn while keeping your knees against the tank and your feet solidly on the footrests. Let the motorcycle move underneath you. Make your escape route the target of your vision. Once you clear the obstacle, press on the opposite handgrip to return to your original direction of travel. To swerve to the left, press the left handgrip, then press the right handgrip to recover. To swerve to the right, press right, then left. Try to stay in your own lane. Change lanes only if you have enough time to make sure there are no vehicles in the other lane. You should be able to squeeze by most obstacles without leaving your lane.

### **IF BRAKING IS REQUIRED, SEPARATE IT FROM SWERVING.**

**Brake before or after —never while swerving.**



Swerve, then brake.



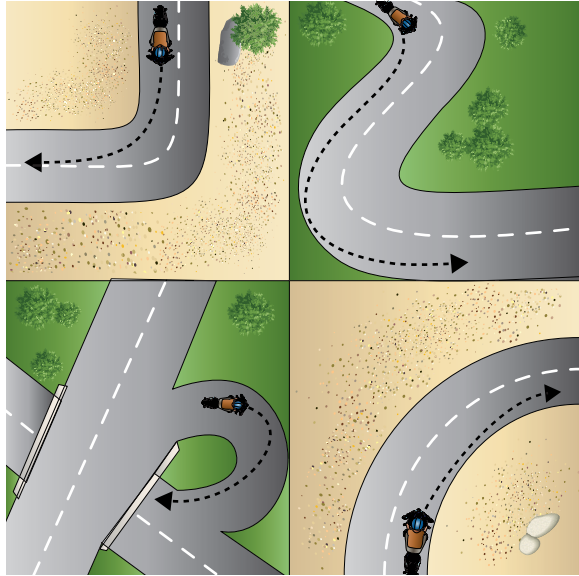
Brake, then swerve.

## Cornering

A primary cause of single-vehicle crashes is motorcyclists running wide in a curve or turn and colliding with the roadway or a fixed object.

Every curve is different. Be alert to whether a curve remains constant, gradually widens, gets tighter, or involves multiple turns.

Use caution when braking on right turns. If you brake too hard, your bike may straighten upright and cause you to swerve out into the oncoming lane of traffic.



Ride within your skill level and within the posted speed limits.

Your best path may not always follow the curve of the road. Change lane position depending on traffic, road conditions, and curve of the road. One recommendation is to start at the outside of a curve to increase your line of sight and the effective radius of the turn. As you turn, move toward the inside of the curve, and as you pass the center, move to the outside to exit.

Another alternative is to move to the center area of your lane before entering a curve — and stay there until you exit. You can adjust for traffic “crowding” the center line, or debris blocking part of your lane.

- 8. The best way to stop quickly is to:**
- A. Use the front brake only.**
  - B. Use the rear brake first.**
  - C. Throttle down and use the front brake.**
  - D. Use both brakes at the same time.**

## **HANDLING DANGEROUS SURFACES**

Your chance of falling or being involved in a collision increases whenever you ride across:

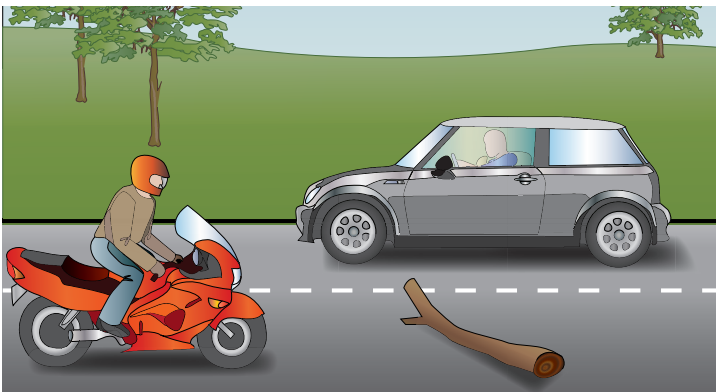
- Uneven surfaces or obstacles.
- Slippery surfaces.
- Railroad tracks.
- Grooves and gratings.

### **Uneven Surfaces and Obstacles**

Watch for uneven surfaces such as bumps, broken pavement, potholes, or small pieces of highway trash.

Try to avoid obstacles by going around them. If you must go over the obstacle, first determine if it is possible. Approach it at as close to a 90° angle as possible. Look where you want to go to control your path of travel. If you have to ride over the obstacle, you should:

- Slow down as much as possible before contact.
- Make sure the motorcycle is straight.
- Rise slightly off the seat with your weight on the footpegs to absorb the shock with your knees and elbows. Rising off the seat will reduce your chances of being thrown off the motorcycle. (However, controlling the throttle can be somewhat tricky from this position. Practice this in an area such as an empty parking lot away from traffic.)
- Just before contact, roll on the throttle slightly to lighten the front end.



If you ride over an object on the street, pull off the road and check your tires and rims for damage before riding any farther.

## Slippery Surfaces

Motorcycles handle better when ridden on surfaces that permit good traction. Surfaces that provide poor traction include:

- **Wet pavement**, particularly just after it starts to rain and before surface oil washes to the side of the road. The center portion of a lane will usually be most slippery.
- **Gravel roads**, or where sand and gravel collect. Sand and gravel are most likely to collect at the sides of paved roads.
- **Mud, leaves, snow, and ice.**
- **Lane markings**, steel plates, and manhole covers, especially when wet.

To ride safely on slippery surfaces:

- **Reduce Speed** — Slow down before you get to a slippery surface to lessen your chances of skidding. Your motorcycle needs more distance to stop. It is particularly important to reduce speed before entering wet curves.
- **Avoid Sudden Moves** — Any sudden change in speed or direction can cause a skid. Be as smooth as possible when you speed up, shift gears, turn, or brake.
- **Use Both Brakes** — The front brake is still effective, even on a slippery surface. Squeeze the brake lever gradually to avoid locking the front wheel. Remember, gentle pressure on the rear brake.
- **The center of a lane** can be hazardous when wet. When it starts to rain, ride in the tire tracks left by cars. Often, the left tire track will be the best position, depending on traffic and other road conditions.

Roads are the slickest when it first starts to rain until the dirt and oil are washed away.

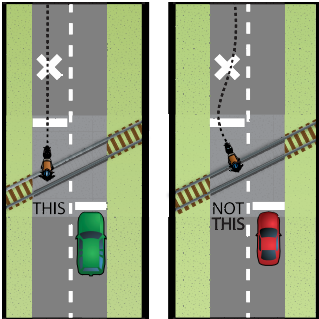
- **Watch for oil spots** when you put your foot down to stop or park. You may slip and fall.
- **Dirt and gravel** collect along the sides of the road — especially on curves and ramps leading to and from highways. Stay away from the edge of the road, particularly when making sharp turns and getting on or off freeways at high speeds.
- **Rain dries and snow melts** faster on some sections of a road than on others. Patches of ice tend to crop up in low or shaded areas and on bridges and overpasses. Wet surfaces or wet leaves are just as slippery. Ride on the least slippery portion of the lane and reduce your speed.

Cautious riders steer clear of roads covered with ice or snow. If you can't avoid a slippery surface, keep your motorcycle straight up and proceed slowly. If you

encounter a large surface that's so slippery that you must coast or travel at a walking pace, consider letting your feet skim along the surface. If the motorcycle starts to fall, you can catch yourself. Be sure to keep off the brakes. If possible, squeeze the clutch and coast. Attempting this maneuver at anything other than the slowest of speeds could prove hazardous.

**Railroad Tracks, Trolley Tracks, and Pavement Seams**

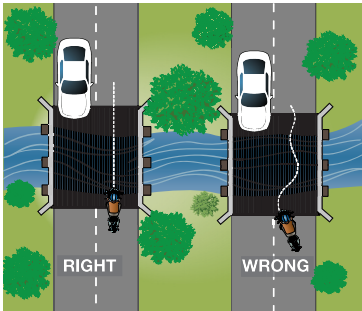
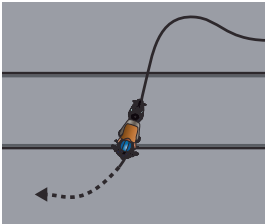
Usually it is safer to ride straight within your lane to cross tracks. Turning to take tracks head-on (at a 90° angle) can be more dangerous — your path may carry you into another lane of traffic.



Move far enough away from tracks, ruts, or pavement seams that run parallel to your course to cross at an angle of at least 45°. Then, make a deliberate turn. Edging across could catch your tires and throw you off balance.

**Grooves and Gratings**

Riding over rain grooves or bridge gratings may cause a motorcycle to weave. The uneasy, wandering feeling is generally not hazardous. Relax, maintain a steady speed and ride straight across. Crossing at an angle forces riders to zigzag to stay in the lane. The zigzag is far more hazardous than the wandering feeling.



9. When you ride across a bridge grating:
- A. Ride at the far right of the lane.
  - B. Increase your speed.
  - C. Slowly zig-zag across the grating.
  - D. Relax, maintain a steady speed, and ride straight across.

## **MECHANICAL PROBLEMS**

You can find yourself in an emergency the moment something goes wrong with your motorcycle. In dealing with any mechanical problem, take into account the road and traffic conditions you face. Here are some guidelines that can help you handle mechanical problems safely.

### **Tire Failure**

You will seldom hear a tire go flat. If the motorcycle starts handling differently, it may be a tire failure. This can be dangerous. You must be able to tell from the way the motorcycle reacts. If one of your tires suddenly loses air, react quickly to keep your balance. Pull off and check the tires.

If the front tire goes flat, the steering will feel “heavy.” A front-wheel flat is particularly hazardous because it affects your steering. You have to steer well to keep your balance.

If the rear tire goes flat, the back of the motorcycle will jerk or sway from side to side.

If either tire goes flat while riding:

- Hold the handlegrips firmly, ease off the throttle, and keep a straight course.
- If you must brake, gradually apply the brake of the tire that isn’t flat, if you are sure which one it is.
- When the motorcycle slows, edge to the side of the road, squeeze the clutch, and stop.

### **Stuck Throttle**

Twist the throttle back and forth several times. If the throttle cable is stuck, this may free it. If the throttle stays stuck, immediately operate the engine cut-off switch and pull in the clutch at the same time. This will remove power from the rear wheel, though engine noise may not immediately decline. Once the motorcycle is “under control,” pull off and stop.

After you have stopped, check the throttle cable carefully to find the source of the trouble. Make certain the throttle works freely before you start to ride again.

### **Wobble**

A “wobble” occurs when the front wheel and handlebars suddenly start to shake from side to side at any speed. Most wobbles can be traced to improper loading, unsuitable accessories, incorrect tire pressure, or misaligned tires and/or chain drive. If you are carrying a heavy load, lighten it. If you can’t, shift it. Center the weight lower and farther forward on the motorcycle. Make sure tire pressure, spring pre-load, air shocks, and dampers are at the settings recommended for that much weight. Make sure windshields and fairings are mounted properly.

Check for poorly adjusted steering, worn steering parts, a front wheel that is bent, misaligned, or out of balance, loose wheel bearings or spokes, and swingarm bearings. If none of these are determined to be the cause, have the motorcycle checked out thoroughly by a qualified professional.

Trying to “accelerate out of a wobble” will only make the cycle more unstable. Instead:

- Grip the handlegrips firmly, but don’t fight the wobble.
- Close the throttle gradually to slow the motorcycle. Do not apply the brakes; braking could make the wobble worse.
- Move your weight as far forward and down as possible.
- Pull off the road as soon as you can to fix the problem.

### **Drive Train Problems**

The drive train for a motorcycle uses either a chain, belt, or drive shaft to transfer power from the engine to the rear wheel. Routine inspection, adjustment and maintenance make failure a rare occurrence. A chain or belt that slips or breaks while you’re riding could lock the rear wheel and cause the motorcycle to skid. If the chain or belt breaks, you’ll notice an instant loss of power to the rear wheel. Close the throttle and brake to a stop in a safe area.

On models with a drive shaft, loss of oil in the rear differential can cause the rear wheel to lock, and you may not be able to prevent a skid.

### **Engine Seizure**

When the engine “locks” or “freezes,” it is usually low on oil. The engine’s moving parts can’t move smoothly against each other, and the engine overheats. The first sign may be a loss of engine power or a change in the engine’s sound. Squeeze the clutch lever to disengage the engine from the rear wheel. Pull off the road and stop. Check the oil. If needed, oil should be added as soon as possible or the engine will seize. When this happens, the effect is the same as a locked rear wheel. Let the engine cool before restarting.

***There Is No Substitute For Frequent Motorcycle Maintenance.***

#### **10. If your motorcycle starts to wobble:**

- A. Accelerate out of the wobble.
- B. Use the brakes gradually.
- C. Grip the handlegrips firmly and close the throttle gradually.
- D. Downshift.

## **ANIMALS**

Naturally, you should do everything you safely can to avoid hitting an animal. If you are in traffic, however, remain in your lane. Hitting something small is less dangerous to you than hitting something big — like a car.

Motorcycles seem to attract dogs. If you are chased, shift down and approach the animal slowly. As you approach it, speed up and leave the animal behind. Don't kick at an animal. Keep control of your motorcycle, and look to where you want to go.

For larger animals (deer, elk, cattle), brake and prepare to stop — they are unpredictable.

### **11. If you are chased by a dog:**

- A. Kick it away.**
- B. Stop until the animal loses interest.**
- C. Swerve around the animal.**
- D. Approach the animal slowly, then speed up.**

## **FLYING OBJECTS**

From time to time riders are struck by insects, cigarettes thrown from cars, or pebbles kicked up by the tires of the vehicle ahead. If you are wearing face protection, it might get smeared or cracked, making it difficult to see. Without face protection, an object could hit you in the eye, face, or mouth. Whatever happens, keep your eyes on the road and your hands on the handlebars. When safe, pull off the road and repair the damage.

## **GETTING OFF THE ROAD**

If you need to leave the road to check the motorcycle (or just to rest for a while), be sure you:

- **Check the Roadside** — Make sure the surface of the roadside is firm enough to ride on. If it is soft grass, loose sand, or if you're just not sure about it, slow way down before you turn onto it.
- **Signal** — Drivers behind might not expect you to slow down. Give a clear signal that you will be slowing down and changing direction. Check your mirror and make a head check before you take any action.
- **Pull Off the Road** — Get as far off the road as you can. It can be very hard to spot a motorcycle by the side of the road. You don't want someone else pulling off at the same place you are.
- **Park Carefully** — Loose and sloped shoulders make setting the side or center stand difficult.



## CARRYING PASSENGERS AND CARGO

Only experienced riders should carry passengers or large loads. The extra weight changes the way the motorcycle handles, balances, turns, speeds up, and slows down. Before taking a passenger or heavy load on the street, practice away from traffic.

Children should be placed immediately behind the rider. A child sitting in front of the rider will not be able to properly balance him/herself and may interfere with the rider's control of the motorcycle.

### **Equipment**

To carry passengers safely:

- Equip and adjust your motorcycle to carry passengers.
- Instruct the passenger before you start.
- Adjust your riding technique for the added weight.
- Have your passenger wear the same type of protective gear recommended for motorcycle operators.

The following equipment is required by Idaho law:

- **A Proper Seat** — large enough to hold both of you without crowding, or a separate, permanently attached passenger seat. You should not sit any farther forward than you usually do.
- **Footrests** — for the passenger. A firm footing prevents your passenger from falling off and pulling you off, too.
- **A Helmet** — any person under the age of eighteen (18) must wear a DOT-approved helmet while operating or riding on a motorcycle.

Adjust the suspension to handle the additional weight. Add a few pounds of pressure to the tires if you carry a passenger. (Check your owner's manual.) While your passenger sits on the seat with you, adjust the mirrors and headlight according to the change in the motorcycle's angle.

### **Instructing Passengers**

Even if your passenger is a motorcycle rider, provide complete instructions before you start. Tell your passenger to:

- **Get on** the motorcycle only after you have started the engine. As the passenger mounts, keep both your feet on the ground and the front brake applied.
- **Sit as far forward** as possible without crowding you.
- **Hold firmly** to your waist, hips, or belt.
- **Keep both feet** on the pegs, even when stopped.
- **Keep legs away** from the muffler(s), chains and moving parts.

- **Stay directly behind you**, leaning as you lean.
- **Avoid unnecessary** talk or motion.

Also, tell your passenger to tighten his or her hold when you:

- **Approach** surface problems,
- **Are about to start** from a stop, and
- **Warn that you** are going to make a sudden move.

### **Riding With Passengers**

Your motorcycle will respond more slowly with a passenger on board. The heavier your passenger, the longer it will take to slow down, speed up, or turn — especially on a light motorcycle.

- Ride a little slower, especially when taking curves, corners, or bumps.
- Start slowing earlier as you approach a stop.
- Open up a larger cushion of space ahead and to the sides.
- Wait for larger gaps to cross, enter, or merge in traffic.

Warn your passenger of special conditions — when you will pull out, stop quickly, turn sharply, or ride over a bump. Turn your head slightly to make yourself understood, but keep your eyes on the road ahead.

### **Carrying Loads**

Most motorcycles are not designed to carry much cargo. Small loads can be carried safely if positioned and fastened properly.

- **Keep the Load Low** — Fasten loads securely, or put them in saddle bags. Piling loads against aissybar or frame on the back of the seat raises the motorcycle's center of gravity and disturbs its balance.
- **Keep the Load Forward** — Place the load over, or in front of, the rear axle. Tankbags keep loads forward, but use caution when loading hard or sharp objects. Make sure the tankbag does not interfere with handlebars or controls. Mounting loads behind the rear axle can affect how the motorcycle turns and brakes. It can also cause a wobble.
- **Distribute the Load Evenly** — Load saddlebags with about the same weight. An uneven load can cause the motorcycle to drift to one side.
- **Secure the Load** — Fasten the load securely with elastic cords (bungee cords or nets). A tight load won't catch in the wheel or chain, which could cause the motorcycle to lock up and skid. Rope tends to stretch and knots come loose, permitting the load to shift or fall.

- **Check the Load** — Stop and check the load every so often to make sure it has not worked loose or moved. Whatever you decide, do not exceed gross vehicle weight rating when traveling with cargo or a passenger, and always make adjustments to the motorcycle to compensate for the added weight.

## 12. Passengers should:

- A. Stay directly behind you, leaning as you lean.
- B. Always sit upright.
- C. Sit as far back as possible.
- D. Never hold onto you.



## GROUP RIDING

If you ride with others, do it in a way that promotes safety and doesn't interfere with the flow of traffic.

### **Keep the Group Small**

Small groups make it easier and safer for car drivers who need to get around them. A small number isn't separated as easily by traffic or red lights. Riders won't always be hurrying to catch up. If your group is larger than four or five riders, divide it up into two or more smaller groups.

### **Keep the Group Together**

- **Plan** — The leader should look ahead for changes and signal early so "the word gets back" in plenty of time. Start lane changes early to permit everyone to complete the change.

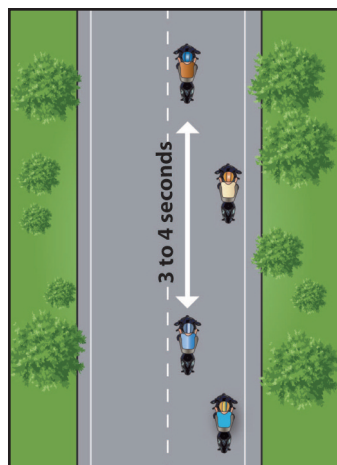
- **Put Beginners Up Front** — Place inexperienced riders just behind the leader. That way, the more experienced riders can watch them from the back.
- **Follow Those Behind** — Let the tailender set the pace. Use your mirrors to keep an eye on the person behind. If a rider falls behind, everyone should slow down a little to stay with the tailender.
- **Know the Route** — Make sure everyone knows the route. Then, if someone is separated they won't have to hurry to keep from getting lost or taking a wrong turn.

## Keep Your Distance

Many groups like to keep close ranks, but it is important to keep a safe distance to allow each rider in the group time and space to react to hazards. A close group takes up less space on the highway, is easier to see and is less likely to be separated. However, it must be done properly.

- **Don't Pair Up** — Never operate directly alongside another rider. There is no place to go if you have to avoid a car or something on the road. To talk, wait until you are both stopped.
- **Staggered Formation** — This is the best way to keep ranks close yet maintain an adequate space cushion.

The leader rides in the left side of the lane, while the second rider stays one-and-a-half to two seconds behind in the right side of the lane.



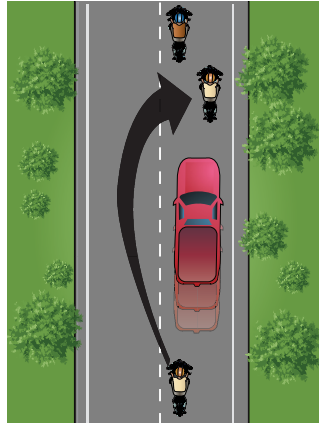
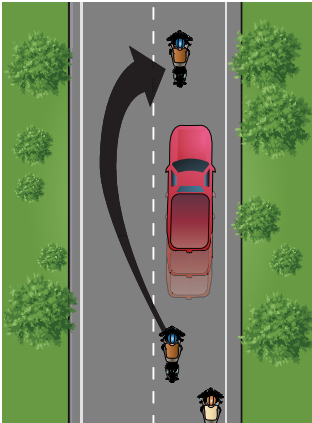
A third rider stays in the left position, three to four seconds behind the first rider. The fourth rider would keep a three to four-second distance behind the second rider. This formation keeps the group close and permits each rider a safe distance from others ahead, behind, and to the sides, and discourages traffic from breaking into the formation.

- **Passing in Formation** — When the group wants to pass slow traffic on a freeway or interstate, the group may pass as a unit. On a two-lane highway, riders in a staggered formation should pass one at a time.

**First, the lead rider should pull out** and pass when it is safe. After passing, the leader should return to the left position and continue riding at passing speed to open room for the next rider.

**After the first rider passes safely,** the second rider should move up to the left position and watch for a safe chance to pass. After passing, this rider should return to the right position and open up room for the next rider.

Some people suggest that the leader should move to the right side after passing a vehicle. This is not a good idea. It encourages the second rider to pass and cut back in before there is a large enough space cushion in front of the passed vehicle. It's simpler and safer to wait until there is enough room ahead of the passed vehicle to allow each rider to move into the same position held before the pass.



- **Single-File Formation** — It is best to move into a single-file formation when riding curves or turning, and when entering or leaving a freeway or highway.

13. When riding in a group, inexperienced riders should position themselves:
- A. Just behind the leader.
  - B. In front of the group.
  - C. At the tail end of the group.
  - D. Beside the leader.

# Being In Shape To Ride

Riding a motorcycle is a demanding and complex task. Skilled riders pay attention to the riding environment and to operating the motorcycle, identifying potential hazards, making good judgments, and executing decisions quickly and skillfully. Your ability to perform and respond to changing road and traffic conditions is influenced by how fit and alert you are. Alcohol and other drugs, more than any other factor, degrade your ability to think clearly and to ride safely. As little as one drink can have a significant effect on your performance.

Let's look at the risks involved in riding after drinking or using drugs. What to do to protect yourself and your fellow riders is also examined.

## **Why This Information is Important**

Alcohol is a major contributor to motorcycle crashes, particularly fatal crashes. Studies show that 40% to 45% of all riders killed in motorcycle crashes had been drinking. Only one-third of those riders had a blood alcohol concentration above legal limits. The rest had only a few drinks in their systems — enough to impair riding skills. In the past, drug levels have been harder to distinguish or have not been separated from drinking violations for the traffic records. But riding “under the influence” of either alcohol or drugs poses physical and legal hazards for every rider.

Drinking and drug use is as big a problem among motorcyclists as it is among automobile drivers. Motorcyclists, however, are more likely to be killed or severely injured in a crash. Injuries occur in 90% of motorcycle crashes and 33% of automobile crashes that involve abuse of substances. On a yearly basis, 2000 motorcyclists are killed and about 50,000 seriously injured in this same type of crash. These statistics are too overwhelming to ignore.

By becoming knowledgeable about the effects of alcohol and other drugs, you will see that riding and substance abuse don't mix. Take positive steps to protect yourself and to protect others from injuring themselves.

## **Alcohol and Other Drugs in Motorcycle Operation**

No one is immune to the effects of alcohol or drugs. Friends may brag about their ability to hold their liquor or perform better on drugs, but alcohol or drugs make them less able to think clearly and perform physical tasks skillfully. Judgment and the decision-making processes needed for vehicle operation are affected long before legal limitations are reached.

Many over-the-counter, prescription, and illegal drugs have side effects that increase the risk of riding. It is difficult to accurately measure the involvement of particular drugs in motorcycle crashes. But we do know what effects various

drugs have on the processes involved in riding a motorcycle. We also know that the combined effects of alcohol and other drugs are more dangerous than either is alone.

### **Alcohol in the Body**

Alcohol enters the bloodstream quickly. Unlike most foods and beverages, it does not need to be digested. Within minutes after being consumed, it reaches the brain and begins to affect the drinker. The major effect alcohol has is to slow down and impair bodily functions — both mental and physical. Whatever you do, you do less well after consuming alcohol.

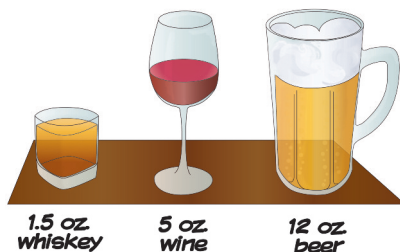
### **Blood Alcohol Concentration (BAC)**

Blood Alcohol Concentration (BAC) is the amount of alcohol in relation to blood in the body. Generally, alcohol can be eliminated in the body at the rate of almost one drink per hour. But a variety of other factors may also influence the level of alcohol retained. The more alcohol in your blood, the greater the degree of impairment.

Three factors play a major part in determining BAC:

- **The amount** of alcohol you consume.
- **How fast** you drink.
- **Your body** weight.

Other factors also contribute to the way alcohol affects your system. Your sex, physical condition, and food intake are just a few that may cause your BAC



level to be even higher. But the full effects of these are not completely known. **Alcohol may still accumulate in your body even if you are drinking at a rate of one drink per hour.** Abilities and judgment can be affected by that one drink.

A 12-ounce can of beer, a mixed drink with one shot of liquor, and a 5-ounce glass of wine all contain the same amount of alcohol. The faster you drink, the more alcohol accumulates in your body. If you drink two drinks in an hour, at the end of that hour, at least one drink will remain in your bloodstream.

Without taking into account any other factors, these examples illustrate why time is a critical factor when a rider decides to drink.

A person who drinks:

- **Seven drinks** over the span of three hours would have at least four ( $7 - 3 = 4$ ) drinks remaining in their system at the end of the three hours. They would need at least another four hours to eliminate the four remaining drinks before they consider riding.
- **Four drinks** over the span of two hours would have at least two ( $4 - 2 = 2$ ) drinks remaining in their system at the end of the two hours. They would need at least another two hours to eliminate the two remaining drinks before they consider riding.

There are times when a larger person may not accumulate as high a concentration of alcohol for each drink consumed. They have more blood and other bodily fluids. But because of individual differences, it is better not to take the chance that abilities and judgment have not been affected. Whether or not you are legally intoxicated is not the real issue. Impairment of judgment and skills begins well below the legal limit.

## Alcohol and the Law

Under Idaho law, you are considered to be driving under the influence if your BAC is .02 or more if you under 21 years of age, .04 or more if you are operating a commercial vehicle, and .08 or more if you are 21 or older. An alcohol concentration of .20 or more carries even stiffer penalties. Even if your BAC is less than .08, you may be convicted of driving under the influence of other intoxicating substances.

## Consequences of Conviction

Years ago, first offenders had a good chance of getting off with a small fine and participation in alcohol-abuse classes. Today the laws of most states impose stiff penalties on drinking operators. And those penalties are mandatory, meaning that judges must impose them.

If you're convicted in Idaho, the criminal penalties are:

- **For a first conviction** — Up to six months in jail; up to a \$1,000 fine; mandatory driver's license suspension of at least 90 days and up to 180 days (one year if under 21), with absolutely no driving privileges for the first 30 days (first 90 days if under 21).
- **For a second conviction within 10 years** — Mandatory jail sentence from 10 days to one year (30 days if under 21); up to a \$2,000 fine;



mandatory driver's license suspension of one year (two years if under 21). Ignition interlock device is required after one year mandatory suspension.

- **For three or more convictions within 10 years** — Mandatory jail sentence from 30 days to ten years (10 days to six months if under 21); up to a \$5,000 fine (up to \$2,000 if under 21); mandatory driver's license suspension from one to five years (if under 21, mandatory suspension for 1 year or up to age 21 whichever is greater). Ignition interlock device is required after one year mandatory suspension. This conviction is a felony.

### **Alcohol Test Refusal**

Implied Consent – Any person who drives or is in physical control of a motor vehicle has given their consent to take a BAC or drug test if they are suspected of driving under the influence, under the provisions of Section 18-8002, Idaho Code. If you refuse to take the test when requested to do so by a law enforcement officer, your driver's license is subject to suspension under the provisions of Section 18-8002, Idaho Code.

If you refuse to take the test as requested, the officer will issue you a notice of suspension. If the court upholds the officer's findings, your license will be suspended for one year with absolutely no driving privileges of any kind if it is your first offense.

A second refusal within 10 years will result in a two-year absolute suspension. This penalty is in addition to any penalty you receive in court for a DUI conviction.

### **Administrative License Suspensions**

If you are arrested for operating a motor vehicle while under the influence of alcohol or other intoxicating substances and you fail an evidentiary test by having an alcohol concentration over the legal limit, a peace officer will serve you with a Notice of Suspension. This notice is an Idaho Transportation Department-imposed administrative driver's license suspension (ALS), that is issued in accordance with Section 18-8002A, Idaho Code. You have the right to request an administrative hearing on the suspension before a hearing officer designated by the department.

The Administrative License Suspension penalty is a civil penalty and is separate and apart from any criminal penalties imposed by the court system. If you receive an Administrative License Suspension, you must comply with the ALS requirements, and also appear in court on your appointed date regarding the criminal DUI charges brought against you. Your notice of suspension becomes effective thirty (30) days after the date of service (the date you received the notice). For a first failure, your driving privileges will be suspended for a period

of ninety (90) days. You will have absolutely no driving privileges during the first thirty (30) days of that ninety (90) day suspension. Your driving privileges will be suspended for one year with absolutely no driving privileges of any kind for a second failure of the test within five (5) years.

### **Minimize the Risks**

Your ability to judge how well you are riding is affected first. Although you may be performing more and more poorly, you think you are doing better and better. The result is that you ride confidently, taking greater and greater risks. Minimize the risks of drinking and riding by taking steps before you drink. Control your drinking or control your riding.

### **Make an Intelligent Choice**

- **Don't drink** — Once you start, your resistance becomes weaker.

Setting a limit or pacing yourself are poor alternatives at best. Your ability to exercise good judgment is one of the first things affected by alcohol. Even if you have tried to drink in moderation, you may not realize to what extent your skills have suffered from alcohol's fatiguing effects.

OR

- **Don't ride** — If you haven't controlled your drinking, you must control your riding.
  - ✓ **Leave the motorcycle** so you won't be tempted to ride. Arrange another way to get home.
  - ✓ **Wait.** If you exceed your limit, wait until your system eliminates the alcohol and its fatiguing effects.

### **Step In to Protect Friends**

People who have had too much to drink are unable to make a responsible decision. It is up to others to step in and keep them from taking too great a risk. No one wants to do this — it's uncomfortable, embarrassing, and thankless. You are rarely thanked for your efforts at the time. But the alternatives are often worse. There are several ways to keep friends from hurting themselves:

- **Arrange a safe ride** — Provide alternative ways for them to get home.
- **Slow the pace of drinking** — Involve them in other activities.
- **Keep them there** — Use any excuse to keep them from getting on their motorcycle. Serve them food and coffee to pass the time. Explain your concerns for their risks of getting arrested or hurt or hurting someone else. Take their key if you can.
- **Get friends involved** — Use peer pressure from a group of friends to intervene.

It helps to enlist support from others when you decide to step in. The more people on your side, the easier it is to be firm and the harder it is for the rider to resist. While you may not be thanked at the time, you will never have to say, “If only I had...”

## **FATIGUE**

Riding a motorcycle is more tiring than driving a car. On a long trip, you’ll tire sooner than you would in a car. Avoid riding when you are tired. Fatigue can affect your control of the motorcycle.

- **Protect Yourself From the Elements** — Wind, cold, and rain make you tire quickly. Dress warmly. A windshield is worth its cost if you plan to ride long distances.
- **Limit Your Distance** — Experienced riders seldom try to ride more than about six hours a day.
- **Take Frequent Rest Breaks** — Stop and get off the motorcycle at least every two hours.
- **Don’t Drink or Use Drugs** — Artificial stimulants often result in extreme fatigue or depression when they start to wear off, making it very difficult to concentrate on the task at hand.

14. If you wait one hour per drink for the alcohol to be eliminated from your body before riding:
- A. You cannot be arrested for drinking and riding.
  - B. Your riding skills will not be affected.
  - C. Side effects from the drinking may still remain.
  - D. You will be okay as long as you ride slowly.

## **PROFESSIONAL TRAINING**

Recent research into Idaho’s fatal motorcycle crash data (2009-2012) revealed some startling findings:

- 69-70% were associated with rider error
- 73% were on cruisers or touring bikes
- 69% were over 40 years old
- 42% involved riders running off the road in a corner
- 20% involved a car violating the rider’s right-of-way

The Idaho **STAR** Motorcycle Safety Program provides high quality rider training that makes motorcycling safer and more enjoyable for everyone.

**STAR** training is associated with a 79% reduced crash risk, and an 89% reduction in the risk of a fatal crash. **STAR** courses are taught by state-certified instructors who have the patience, understanding, training, and knowledge to help you develop the skills you need.

**Training for all Levels** — Whether you have ridden thousands of miles, or have never even sat on a motorcycle, Idaho **STAR** has a course to fit your needs. Increasing your knowledge and skill can help keep you out of the crash statistics.

**STAR** courses take place in a controlled, off-street environment and are designed to help you develop the physical skills as well as the mental strategies needed to successfully navigate today's roadways and prevent crashes. Idaho **STAR** courses are held throughout the state during the riding season.

**Introduction to Riding** — This is the perfect course for folks who just want to see if motorcycling is for them or those who are especially nervous about riding and would like to ease into it at a slower pace. This 3-hour session covers motorcycle controls, starting, stopping, and balance. Class sizes are kept low for lots of individual attention. Motorcycles and helmets are provided.

**Basic I Course** — Designed for the novice rider with no (or limited) street-riding experience. During this 17-hour course, you will learn fundamental skills required to operate the motorcycle and progress to street-strategies and emergency situation skills. Motorcycles and helmets are provided in this course.

**Basic II Course** — For riders who are already comfortable with the basic skills of turning, shifting, stopping, and balancing the motorcycle. This 9-hour course includes instruction in street-strategies and emergency situation skills. You will practice cornering, braking, and swerving maneuvers on the riding course. Ride one of our motorcycles or bring your own.

**Experienced Course** — Designed for motorcycle riders with at least three months of current street-riding experience. In this 9-hour course, you will learn street-strategies and hazard-response skills as well as practice low-speed maneuvers and advanced cornering, braking, and swerving skills on your own motorcycle.

**Braking Skills Practice** — Designed for fully endorsed riders with current street-riding experience. In this 3-hour clinic, you will improve your braking skills and build confidence in your ability to handle emergency braking situations on your own motorcycle.

**Cornering Skills Practice** — For fully endorsed riders with current street-riding experience. In this 3-hour clinic, you will improve your skills and build confidence in leaning and cornering on your own motorcycle.

**Precision Riding Clinic** — For fully endorsed riders with a minimum of two years or 10,000 miles of current street-riding experience. This 16-hour intensive on-cycle course is based on Idaho Police Motor School drills. You will have the opportunity to master precision vehicle control, advanced low-speed maneuvering, and hazard response skills on your own motorcycle.

**Sidecar/Trike Course** — Designed for sidecar and trike operators with at least three months of current street-riding experience. In this 9-hour course you will learn street strategies and hazard response skills as well as practice cornering, braking, and swerving skills on your own three-wheeled rig.

### **Motorcycle Endorsements**

Successful completion of a Basic I, Basic II, or Experienced Idaho **STAR** course will waive the skills test portion of the motorcycle endorsement requirement. Successful completion of the Sidecar/Trike course will waive the skills test portion of a 3-wheel only endorsement.

If you are under 21, state law requires completion of an approved motorcycle rider training course (Basic I, Basic II, or Experienced Course) before you can apply for a motorcycle endorsement.

The Idaho **STAR** Motorcycle Safety Program is incorporated within the Division of Professional-Technical Education and is operated by the College of Southern Idaho. To learn more or to register for a class, go to [idahostar.org](http://idahostar.org) or call (888) 280-STAR (7827).

Idaho **STAR** Motorcycle Safety Program

[idahostar.org](http://idahostar.org)

1-888-280-**STAR** (7827)

## **Smart Rider Commitments**

The “Smart Rider Commitments” below are taken from the Idaho **STAR** Basic Rider Training Rider’s Guide available as a free pdf at:

<http://idahostar.org/resources/rider’s-guide>.

We encourage you to review and consider making some (or all) of these commitments as a way to help you prevent and survive crashes and come home safely to your loved ones after every ride.

\_\_\_\_ (initial) “I acknowledge that part of being a responsible rider is knowing and following the ‘rules of the road.’ I accept this fact and commit to learning and complying with state laws, rules, regulations and equipment requirements.”

\_\_\_\_ (initial) “I acknowledge that riding a motorcycle in a complex traffic and roadway environment is an activity involving risk and danger. I accept this fact and commit to managing those risks.”

\_\_\_\_ (initial) “I acknowledge that when riding a motorcycle, the only thing between me and the elements (hot, cold, rain, hail, bugs, the asphalt, other vehicles, etc.) is the gear I am wearing. I accept this fact and commit to getting and wearing riding gear that is right for me and my family.”

\_\_\_\_ (initial) “I acknowledge that an expert rider is one who uses expert judgment to avoid having to use expert skills. I accept this fact and commit to becoming an expert rider by practicing SIPDE skills, keeping my eyes up and scanning 20 seconds ahead.”

\_\_\_\_ (initial) “I acknowledge that motorcyclists running wide in turns is the most common fatal crash situation. I accept this fact and commit to practicing good cornering skills, and in particular LOOKING through the turn and PRESSING forward on the handgrip to cause the bike to lean/turn.”

\_\_\_\_ (initial) “I acknowledge that braking errors are very common in crash situations. I accept this fact and commit to regularly practicing quick stops, with an emphasis on smooth increasing pressure on the front brake and a light to lighter application of the rear brake.”

\_\_\_\_ (initial) “I acknowledge that many fatal motorcycle crashes involve riders who had been drinking. I accept this fact and commit to separate the use of alcohol (and other drugs) from riding a motorcycle. I commit to riding sober.”

\_\_\_\_ (initial) “I acknowledge that when I carry a passenger, I am responsible for their safety and comfort. I accept this fact and commit to waiting to carry passengers until I have well developed skills and significant experience as a solo rider.”

\_\_\_\_ (initial) “I acknowledge that group riding demands more skill and attention than riding solo. I accept this fact and commit to waiting to ride with a group until I have well developed skills and significant experience riding by myself or with just one other (and more experienced) rider.”

## **KNOWLEDGE TEST (Sample Questions)**

---

*(The answers are printed at the bottom of the last page.)*

- 1. It is MOST important to flash your brake light when:**
  - A. someone is following too closely.
  - B. you will be slowing suddenly.
  - C. there is a stop sign ahead.
  - D. your signals are not working.
  
- 2. The FRONT brake supplies how much of the potential stopping power?**
  - A. About 25%.
  - B. About 50%.
  - C. About 70%
  
- 3. To swerve correctly:**
  - A. shift your weight quickly.
  - B. turn the handlebars quickly.
  - C. press the handgrip in the direction of the turn.
  - D. press the handgrip in the opposite direction of the turn.
  
- 4. If a tire goes flat while riding, it is usually best to:**
  - A. relax on the handgrip.
  - B. shift your weight toward the good tire.
  - C. brake on the good tire and steer to the side of the road.
  
- 5. A car is waiting to enter the intersection. It is best to:**
  - A. make eye contact with the driver.
  - B. reduce speed and be ready to react.
  - C. speed up and be ready to react.
  - D. maintain speed and move right.

## **MOTORCYCLE SKILL TEST**

Basic vehicle control and obstacle-avoidance skills are included in skill tests to determine your ability to handle normal and hazardous traffic situations. For example, you may be tested for your ability to:

- Know your motorcycle and your riding limits.
- Accelerate, brake, and turn safely.
- See, be seen, and communicate with others.
- Adjust speed and position to the traffic situation.
- Stop, turn, and swerve quickly.
- Make critical decisions and carry them out.

Examiners may score on factors related to safety such as:

- Selecting safe speeds to perform maneuvers.
- Choosing the correct path and staying within boundaries.
- Completing normal and quick stops.
- Completing normal and quick turns, or swerves.

To receive a motorcycle endorsement with full privileges, most states require that maneuvers be performed as designed for single-track, two-wheeled motorcycles. On-motorcycle skill tests are not designed for sidecars or three-wheeled vehicles. Those vehicles maneuver differently than a two-wheeled motorcycle. Restrictions (sidecar, three-wheeled vehicle) may be added until completion of a two-wheeled motorcycle test.

Diagrams and drawings used in this manual are for reference only and are not to correct scale for size of vehicles and distances.

Three wheel information:

Contact **Idaho STAR (1-888-280-7827)** for specific information about operation of three-wheeled motorcycles or motorcycles with sidecars.

**The following are some of the skills you will have to demonstrate during the skills test:**

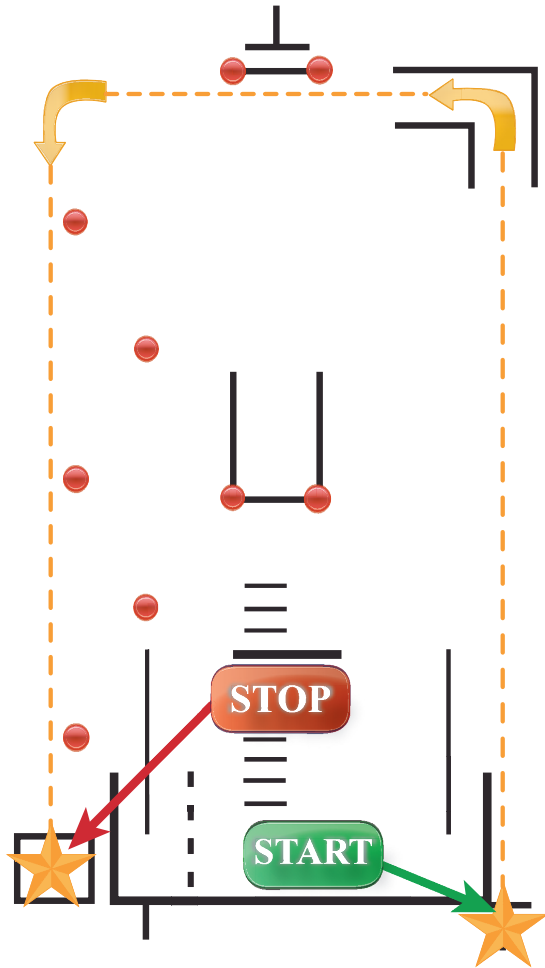


### A Sharp Turn and a Normal Stop

You will be required to demonstrate a sharp left turn inside the corner boundaries shown on the diagram below. Then you will be required to make a smooth, non-skidding stop with your front tire inside the designated stop box.

Scoring deductions will be made for:

- A foot touching the ground.
- If either tire crosses either boundary line.
- If the motorcycle skids.
- Not stopping inside the designated box.

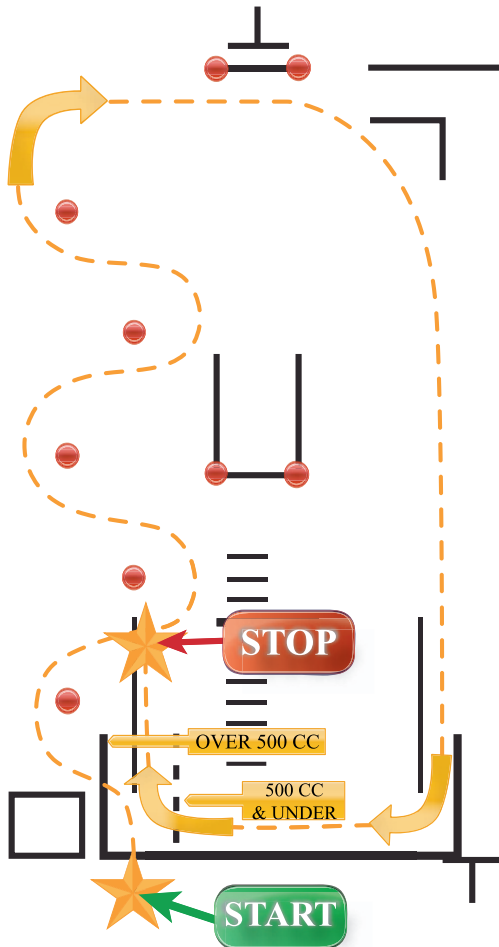


### Cone Weave and U-turn

You will be required to weave past five cones and make a right U-turn.

Scoring deductions will be made for:

- A foot touching the ground.
- Skipping or hitting a cone.
- A tire touching a boundary line during the U-turn.

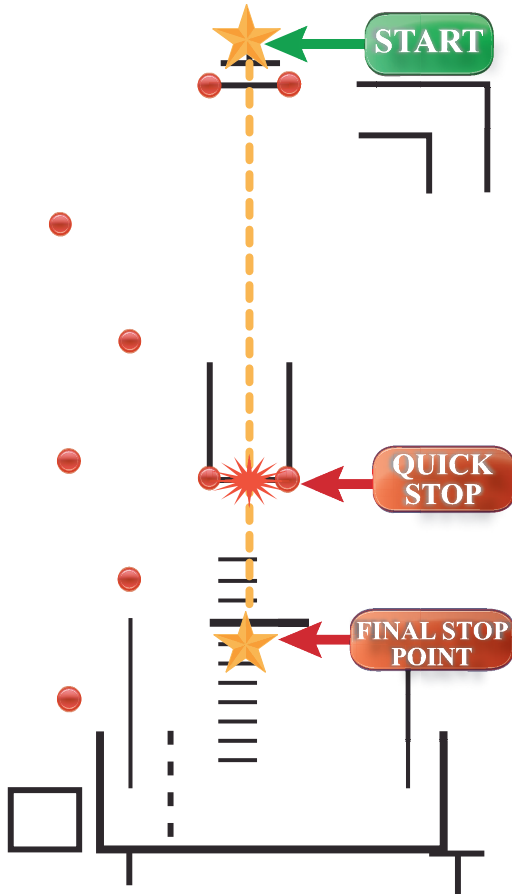


## Quick Stop

You will be required to stabilize your speed between 12-20 mph by the time you reach the first line. Maintain a steady speed. When your front tire passes the second line, stop as fast as you safely can.

Scoring deductions will be made for:

- Not stopping within the maximum distance allowed.
- Not reaching the correct speed range.

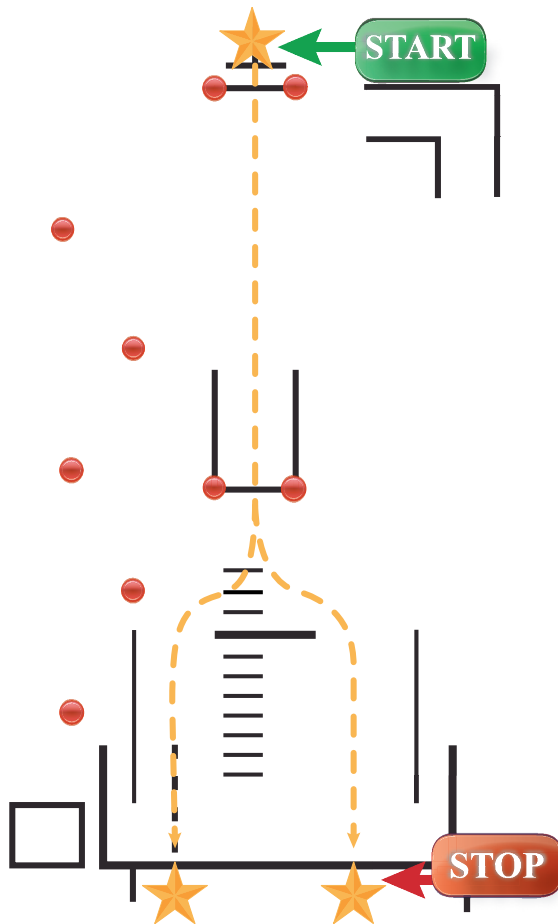


## Obstacle Swerve

You will be required to stabilize your speed between 12-20 mph by the time you reach the first line. Maintain a steady speed. When your front tire passes the second line, you will be required to swerve to avoid hitting an obstacle line.

Scoring deductions will be made for:

- Either tire touching the obstacle line or sideline.
- Not reaching the correct speed range.



Points will be deducted if you stall your engine while attempting any of the maneuvers.

You will be graded on your ability to control the cycle, maneuver, turn, stop quickly and ride in a straight line. The examiner also will watch your posture and overall operation and attention.

You may stop the test at any time you desire. You should not attempt a test you do not feel you can do. If a test is too hard, or you cannot safely follow instructions, tell the examiner. You can make an appointment for another day.

If you would like to view videos of the motorcycle skills test, you can go to [idahostar.org/resources/practice-guide](http://idahostar.org/resources/practice-guide). The Washington State Department of Licensing produced the videos and is allowing us viewing privileges.

*Answers:* 1-C, 2-D, 3-D, 4-A, 5-B, 6-C, 7-D, 8-D, 9-D, 10-C, 11-D, 12-A, 13-A, 14-C

*Knowledge Test Answers:* 1-B, 2-C, 3-C, 4-C, 5-B

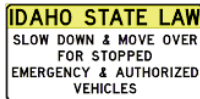
# ROAD SIGNS

SEE THE IDAHO DRIVERS MANUAL FOR  
DETAILS AND MORE SIGNS

## REGULATORY SIGNS



## WARNING SIGNS



## CONSTRUCTION SIGNS



## GUIDE SIGNS

